

1/22/1982

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS



State of Oregon
Department of
Environmental
Quality

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OREGON ENVIRONMENTAL QUALITY COMMISSION MEETING

January 22, 1982

14th Floor Conference Room
Department of Environmental Quality
522 S. W. Fifth Avenue
Portland, Oregon

AGENDA

9:00 am CONSENT ITEMS

These items are routine and are usually acted on without public discussion. If any item is of specific interest to the Commission or sufficient need for public comment is indicated, the Chairman may hold any item over for discussion.

APPROVED A. Minutes of the December 4, 1981, EQC meeting.

APPROVED B. Monthly Activity Report for November, 1981.

APPROVED* C. Tax credits [*T-1466 was withdrawn; T-1356 and T-1390 were denied]

9:05 am PUBLIC FORUM

An opportunity for citizens to address the Commission on environmental issues and concerns not a part of this scheduled meeting. The Commission reserves the right to discontinue this forum after a reasonable time if an unduly large number of speakers wish to appear.

HEARING AUTHORIZATIONS

Public testimony will be accepted on the advisability of scheduling a public hearing but not on the substance of the rule.

APPROVED D. Request for authorization to conduct public hearings on proposed amendments to rules governing on-site sewage disposal, OAR 340-71-100 to 340-71-600, OAR 340-73-025 to 340-73-085.

ACTION AND INFORMATIONAL ITEMS

Public testimony will be taken on all remaining items except those for which a public hearing has previously been held. Those items on which testimony will not be taken are indicated by an asterisk (*). However, the Commission may choose to question interested parties present at the meeting.

APPROVED E. Request for variance to on-site sewage disposal rules:
Charles Mersereau.

APPEAL
DENIED F. Appeal of subsurface variance approval granted to Mr. Marvin Peters:
Mr. and Mrs. Ronald G. Walters, Lincoln County.

~~G. DEQ vs. Jensen, Carl~~

POSTPONED

- APPROVED * H. Proposed adoption of geographic area rule for the Christmas Valley Townsite, Lake County
- APPROVED I. City of Seaside - approval of sewerage system improvement program
- APPROVED * J. Adoption of amendments to sulfur content of fuels, coal, rule, w/amendment 340-22-020, to limit sulfur and volatile content of coal used for residential space heating.
- APPROVED * K. Proposal to adopt amendments to the State Photochemical Oxidant w/added lang. Ambient Air Quality Standard (OAR 340-31-030) ~~and Air Pollution Alert Level (OAR 340-27-010)~~ as a revision to the State Implementation Plan.
- APPROVED L. Reconsideration of approval of Lane Regional Air Pollution Authority (LRAPA) to administer New Source Performance Standards (NSPS) for kraft pulp mills.
- APPROVED * M. Proposed adoption of a hazardous waste schedule of civil penalties, OAR 340, Division 12.
- ACCEPTED N. Status report on the Total Suspended Particulate Strategy for the Medford-Ashland AQMA.
- ACCEPTED O. Informational report: Attorney General's opinion concerning solid waste disposal and resource recovery from solid waste.

WORK SESSION

The Commission reserves this time if needed to further consider proposed action on any item on the agenda.

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

The Commission will breakfast (7:30 am) at the Portland Motor Hotel, 1414 S. W. Sixth Avenue, Portland; and will lunch at DEQ Headquarters, 522 S. W. Fifth Avenue, Portland.

ENVIRONMENTAL QUALITY COMMISSION

January 22, 1982

BREAKFAST AGENDA

- | | |
|-----------------------|-------|
| 1. Budget update | Downs |
| 2. Legislative update | Biles |

LUNCH AGENDA

- | | |
|-----------------------------|-------|
| 1. Goals & Objectives draft | Downs |
|-----------------------------|-------|

THESE MINUTES ARE NOT FINAL UNTIL APPROVED BY THE EQC

MINUTES OF THE ONE HUNDRED THIRTY--SEVENTH MEETING

OF THE

OREGON ENVIRONMENTAL QUALITY COMMISSION

January 22, 1981

On Friday, January 22, 1982, the one hundred thirty-seventh meeting of the Oregon Environmental Quality Commission convened at the Department of Environmental Quality, Portland, Oregon. Present were Commission members Mr. Joe B. Richards, Chairman; Mr. Fred J. Burgess; Mr. Ronald M. Somers; Mr. Wallace B. Brill; and Mrs. Mary V. Bishop. Present on behalf of the Department were its Director, William H. Young, and several members of the Department staff.

The staff reports presented at this meeting, which contain the Director's recommendations mentioned in these minutes, are on file in the Office of the Director of the Department of Environmental Quality, 522 S.W. Fifth Avenue, Portland, Oregon. Written information submitted at this meeting is hereby made a part of this record and is on file at the above address.

BREAKFAST MEETING

The breakfast meeting convened at 7:30 a.m. at the Portland Motor Hotel in Portland. Commissioners Richards, Somers, Brill, Burgess and Bishop were present, as were several members of the Department staff.

The following items were discussed:

1. Agenda Format: The Commission expressed satisfaction with the new format of the agenda. They further suggested scheduling at the end of the meeting those items where no public testimony would be accepted. In that way, interested citizens would not need to wait throughout an entire meeting for any item of interest.
2. Budget Update: Mike Downs, Management Services Administrator, reviewed the status of the budget. The Director added that layoff letters have been sent to those employees listed in the first 10% reduction package and that layoffs are being made in the subsurface program because of reduction in fee revenues.
3. Legislative update: Stan Biles, Assistant to the Director, summarized the following information from his attendance at the Special Session:

1. Governor's economic recovery program;
2. Proposed bill exempting METRO's resource recovery facility from EFSEC review;
3. Proposed bill which would require all state agencies to complete permit reviews within 60 days.

FORMAL MEETING

Commissioners Richards, Somers, Burgess, Brill and Bishop were present for the formal meeting.

AGENDA ITEM A - MINUTES OF THE DECEMBER 4, 1981 MEETING.

It was MOVED by Commissioner Somers, seconded by Commissioner Brill, and carried unanimously that the Minutes be approved as submitted.

AGENDA ITEM B - MONTHLY ACTIVITY REPORT FOR NOVEMBER, 1981.

It was MOVED by Commissioner Somers, seconded by Commissioner Bishop, and passed unanimously that the Director's recommendations be approved.

AGENDA ITEM C -- TAX CREDITS.

It was MOVED by Commissioner Somers, seconded by Commissioner Burgess, and carried unanimously that the Director's Recommendation be approved with the following amendment:

T-1466, Chembond Corporation's application for tax credit, was withdrawn at the request of the company.

PUBLIC FORUM:

Dr. Robert Paeth, DEQ Soil Scientist, was honored with a Certificate of Appreciation from the Oregon Environmental Health Association for his outstanding contribution to the continuing education of Oregon sanitarians. Kathy Morris and Bob Wilson from OEHA presented the award to Dr. Paeth.

AGENDA ITEM D - REQUEST FOR AUTHORIZATION TO CONDUCT PUBLIC HEARINGS ON PROPOSED AMENDMENTS TO RULES GOVERNING ON-SITE SEWAGE DISPOSAL, OAR 340-71-100 to 340-71-600, OAR 340-73-025 to 340-73-085.

This Item was a request for authorization to conduct public hearings on the matter of amending the On-Site Sewage Disposal Rules. Testimony would

be received on several substantive and housekeeping amendments. Hearings are proposed to be held in four locations throughout the state on February 2, 1982.

Director's Recommendation

Based upon the Summation, it is recommended that the Commission authorize public hearings, to take testimony on the question of amending OAR 340-71-100 to 340-71-600, and OAR 340-73-025 to 340-73-085, as presented in Attachment "C", "D", and "E".

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

AGENDA ITEM E - CHARLES MERSEREAU - REQUEST FOR VARIANCE TO ON-SITE SEWAGE DISPOSAL RULES

Agenda Item E concerns a request from Mr. Charles Mersereau for variance from the On-Site Sewage Disposal Rules. Mr. Mersereau's property is located within the Clatsop Plains Moratorium area.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the Commission adopt the recommendation of the variance officer as the Commission's findings, and grant variances from OAR 340-71-460(6)(e).

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

AGENDA ITEM F - MR. AND MRS. RONALD WALTERS--APPEAL OF VARIANCE APPROVAL GRANTED TO MR. MARVIN PETERS.

Mr. and Mrs. Ronald Walters are appealing the decision of Mr. Gary Messer, a Department Variance Officer, to grant a variance to the On-Site Sewage Disposal Rules. The variance was granted to Mr. Marvin Peters. Mr. and Mrs. Walters own property near that of Mr. Peters.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the Commission adopt the findings of the Variance Officer as the Commission's findings and uphold the decision to approve the variance.

It was MOVED by Commissioner Somers, seconded by Commissioner Bishop, and carried unanimously that the Director's Recommendation be approved. The appeal was denied.

AGENDA ITEM H - PROPOSED ADOPTION OF GEOGRAPHIC AREA RULE FOR CHRISTMAS VALLEY TOWNSITE, LAKE COUNTY, OAR 340-71-400(4).

At the October 9, 1981 meeting, the Commission authorized a public hearing to be held on the question of adopting a geographic area rule for the Christmas Valley Townsite. A hearing was held at the Christmas Valley Community Hall on November 19, 1981.

Director's Recommendation

Based upon the Summation, it is recommended that the Commission adopt the proposed geographic area rule for the Christmas Valley Townsite, OAR 340-71-400(4), as set forth in Attachment "D".

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

AGENDA ITEM J - ADOPTION OF AMENDMENTS TO SULFUR CONTENT OF FUELS, COAL, RULE, OAR 340-22-020, TO LIMIT SULFUR AND VOLATILE CONTENT OF COAL USED FOR DIRECT RESIDENTIAL SPACE HEATING.

The Department has investigated the potential air quality impacts that may occur if coal came into widespread use as a residential heating fuel. The Portland Air Quality Advisory Committee and a Special Health Effects Review Committee, composed of prominent medical officials, aided in this review. There was general consensus that coal should be restricted as a preventive control measure, and the Department is now proposing a "clean coal" rule for adoption which would become effective July 1, 1983. Public hearings and all other necessary legal notices have been given on this matter.

Director's Recommendation

Based on the Summation, it is the Director's Recommendation that the proposed residential coal rule OAR 340-22-020 (Attachment A) be adopted with amendments as shown which would:

1. Provide a means for existing coal users to apply for an exemption,
2. Provide that the sulfur limit for devolatilized coal could be measured prior to devolatilization, and
3. Provide for application of the rule to fuels manufactured with coal as an additive.

It was MOVED by Commissioner Bishop, seconded by Commissioner Brill, and passed that the Director's Recommendation be approved with the following amendment:

Delete Section 4(b), Page 2, Attachment A.

Commissioner Somers voted no.

AGENDA ITEM K - ADOPTION OF AMENDMENTS TO THE STATE PHOTOCHEMICAL OXIDANT
AMBIENT AIR QUALITY STANDARD (OAR 340-31-030) AS A REVISION
TO THE STATE IMPLEMENTATION PLAN.

In 1971, the Federal Environmental Protection Agency, acting on limited data, set the National Ambient Air Quality Standard for photochemical oxidant at 0.08 ppm of total oxidants.

In 1979, acting on more data, much of which was conflicting as to result, and after long and bitter debate, the Environmental Protection Agency revised its standard upward to 0.12 ppm as ozone. Also in 1979, the Environmental Quality Commission authorized hearings to consider similar changes to the state standard but after hearing the testimony, voted to retain the 0.08 ppm standard but measured as ozone.

To facilitate complying with the Clean Air Act, the Commission directed the Department to develop attainment strategies to achieve compliance with the 0.12 ppm standard until 1985, at which time, strategies would then be considered for attaining the 0.08 ppm standard by 1992.

In October, 1981, the Department requested and received authorization to hold formal public hearings to again consider revising the state standard to conform with the federal standard and thereby help resolve the uncertainties relative to control strategies imposed by the dual standard.

Public hearings were held in Portland on November 18, 1981, and in Medford on November 23, 1981.

No new, compelling data resulted from these hearings, and the Commission was presented a report which contains a recommendation to revise the state standard to conform to the federal standard.

Director's Recommendation

Based on the Summation, it is recommended that the Commission adopt 0.12 ppm ozone, 1 hour average, as the state's ozone standard (Amended OAR 340-31-030).

It was MOVED by Commissioner Somers, seconded by Commissioner Burgess, and passed that the Director's Recommendation be amended and adopted, to read as follows:

Director's Recommendation

Based on the Summation, it is recommended that the Commission adopt 0.12 ppm ozone, 1 hour average, as the state's ozone standard (Amended OAR 340-31-030), and that the 0.12 ppm standard be submitted to EPA as a revision to the Oregon Clean Air Act Implementation Plan.

[Underlined language to be added]

Commissioner Bishop voted no.

AGENDA ITEM L - RECONSIDERATION OF APPROVAL OF LANE REGIONAL AIR POLLUTION
AUTHORITY (LRAPA) TO ADMINISTER NEW SOURCE PERFORMANCE
STANDARDS (NSPS) FOR KRAFT PULP MILLS.

At the October 9, 1981 EQC meeting, the Commission approved the Director's Recommendation approving LRAPA rules for 15 New Source Performance Standards and authorized delegation of authority to LRAPA to implement the rules. Included in that group of sources was a NSPS for kraft mills. Historically, by action of the Sanitary Authority when Regional Authorities were formed and approved, kraft pulp mills were retained under jurisdiction of the Sanitary Authority and subsequently the DEQ. This report addresses the continued retention of the kraft mill sources by DEQ until such time as LRAPA may petition for delegation of authority pursuant to statute ORS 468.540.

Director's Recommendation

Based on the above Summation, the Director recommends the Commission amend its action of October 9, 1981, to withdraw delegation for administering the new source performance standards for kraft pulp mills to LRAPA.

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

AGENDA ITEM M - PROPOSED ADOPTION OF A HAZARDOUS WASTE SCHEDULE OF CIVIL
PENALTIES, OAR CHAPTER 340, DIVISION 12.

Because of its high potential for human health and environmental damage, hazardous waste requires special management controls. This need has been recognized since 1971 when Oregon first adopted hazardous waste legislation, so that today we have a comprehensive management program that controls hazardous waste from the time of generation through transportation, storage, treatment and disposal. However, until action was taken by the 1981 Legislature (Chapter 709 - 1981 Laws), hazardous waste was the only major DEQ program without full authority to assess civil penalties covering all phases of its concern.

Although the authorizing statute by itself is adequate, it does not serve to reflect program priorities or guide in setting penalty levels for specific violations. The schedule proposed for adoption is intended to achieve these ends by establishing minimum fines which penalize most heavily those program violations which may lead to the most serious consequences. We believe it clearly indicates DEQ's intent to keep hazardous waste out of the environment.

Director's Recommendation

Based upon the summation, it is recommended that the Commission adopt

the proposed amendments to the civil penalty rules, OAR Chapter 340, Division 12.

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

AGENDA ITEM N - STATUS REPORT ON THE TOTAL SUSPENDED PARTICULATE STRATEGY FOR THE MEDFORD/ASHLAND AQMA.

A revised particulate control strategy is needed to meet the primary and secondary particulate standards in the Medford - White City area. Major particulate sources and potential control measures were reviewed in a report to the Commission at the June 5, 1981 meeting in Medford. Since June, 1981, the Air Quality Advisory Committee and the Jackson County Commissioners have completed their recommendations for a particulate control strategy. This status report outlines the proposed schedule for completion of the Medford TSP SIP.

Director's Recommendation

This status report is submitted to the Commission primarily for information purposes. It is recommended that the Commission schedule its June 4, 1982 EQC meeting in Medford to consider adoption of a Total Suspended Particulate standard attainment strategy for that area.

The Commission accepted this report.

AGENDA ITEM O - INFORMATIONAL REPORT: ATTORNEY GENERAL'S OPINION CONCERNING SOLID WASTE DISPOSAL AND RESOURCE RECOVERY FROM SOLID WASTE.

The Department recently received a formal legal opinion from the Attorney General concerning our authority to regulate resource recovery from solid waste. This opinion was requested in order to clarify legislative intent in this area generally and specifically as it relates to recycling operations and to the use of used motor vehicle tires for various purposes.

The Department has received complaints concerning the construction of a tire fence by an individual in Yamhill County and has received inquiries regarding other uses of tires and the operation of recycling centers. In addition, there is a wide range of commercial activities involving used materials that could be construed to be resource recovery as defined in the statutes.

The Attorney General's Opinion confirms that the Department has broad potential regulatory authority in this area. The Department is proposing, however, to exercise discretion and to limit its regulatory activities to only those cases where there is a clear potential threat to public health or the environment. The Commission's concurrence in this matter is requested.

Director's Recommendation

It is recommended that the Commission concur in the following course of action to be pursued by the Department:

1. Continue to regulate solid waste disposal in its traditional sense, including but not limited to landfilling, open burning, incineration and composting.
2. Continue to regulate "Resource Recovery" as defined in ORS 459.005 only where there is a potential threat to public health or the environment.
3. Not initiate any enforcement action at this time against Mr. William C. Remior for construction of a tire fence, based on the information currently available to the Department.
4. Continue to regulate the storage of solid waste in cases where waste is stored for more than six months or where the nature, amount, or location of the stored waste is such that, in the Department's opinion, it constitutes a potential environmental problem.
5. Explore the concept of prohibiting the disposal of certain readily recyclable materials at landfill sites with affected parties and report back to the Commission in the future.

Mr. W. C. Remior appeared in support of the staff report. The following people appeared in opposition:

Merrill K. Haddon	3021 Industrial Way, Salem
Jacque Wagner	Route 1, Box 63, Yamhill
Nellie Raineri	Route 1, Box 84, Yamhill

The Commission concurred with the Director's Recommendation. In addition, the Commission asked staff to report back to them as to what extent of involvement would exist if it were determined that facilities such as this should be subject to permits and potential enforcement action.

AGENDA ITEM I - CITY OF SEASIDE—APPROVAL OF SEWERAGE SYSTEM IMPROVEMENT PROGRAM.

The City of Seaside has submitted a proposed program for sewerage system improvements. They propose to proceed without federal funds to reduce inflow into the sewer system, improve the existing treatment plant, and construct the first phase of a new treatment plant. Their proposal is the first such program submitted for your approval pursuant to the Sewerage Works Planning and Construction Policy adopted by you on October 9, 1981.

Staff recommended that the Commission approve the City's program in concept and authorize the Department to enter into a revised implementation agreement with the City to reflect the overall program, allow up to 300 additional sewer connections based on initial improvements, and provide for authorization of further connections as further improvements are made.

Director's Recommendation

1. Based on the Summation, it is recommended that the Commission approve in concept the sewerage system improvement program proposed by the City of Seaside; and
2. Authorize the Department to enter into a revised stipulated agreement with the City to reflect this overall program, allow up to 300 additional connections to the sewer system as initial improvements are made, and provide for re-evaluation and authorization of further connections as significant progress occurs to accomplish the following:
 - a. Development and approval of a long-range sewerage system financing plan,
 - b. Passage of a bond issue for Phase I work, and
 - c. Award of construction contract.

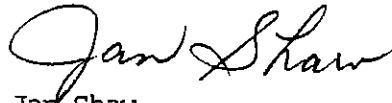
It was MOVED by Commissioner Somers, seconded by Commissioner Burgess, and carried unanimously that the Director's Recommendation be approved.

There being no further business, the meeting was adjourned.

LUNCH MEETING

The staff reviewed for the Commission the draft Goals and Objectives of the Department. The Commission was asked to review the document at their leisure and respond within two weeks with any comments they might have.

Respectfully submitted,



Jan Shaw
Commission Assistant

THESE MINUTES ARE NOT FINAL UNTIL APPROVED BY THE EQC

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

December 4, 1981

On Friday, December 4, 1981, the one hundred thirty-sixth meeting of the Oregon Environmental Quality Commission convened at the Department of Environmental Quality, Portland, Oregon. Present were Commission members Mr. Joe B. Richards, Chairman; Mr. Fred J. Burgess; Mr. Ronald M. Somers; and Mr. Wallace B. Brill. Present on behalf of the Department were its Director, William H. Young, and several members of the Department staff.

The staff reports presented at this meeting, which contain the Director's recommendations mentioned in these minutes, are on file in the Office of the Director of the Department of Environmental Quality, 522 S.W. Fifth Avenue, Portland, Oregon. Written information submitted at this meeting is hereby made a part of this record and is on file at the above address.

BREAKFAST MEETING

The breakfast meeting convened at 7:30 a.m. at the Riverside West Motel in Portland. Commissioners Richards, Somers, Brill and Burgess were present, as were several members of the Department staff.

The following items were discussed:

1. Future EQC meeting schedule and locations: The Commission decided to stay with the six-week schedule and to hold the next six meetings in Portland, except for the April 16 meeting which might be held in Medford.
2. Tax credits: The Director pointed out several requests for preliminary certification waiver that were on the formal agenda. The Commission discussed them when that item came before them at the meeting.
3. Hazardous waste - addendum to staff report: Richard Reiter, Hazardous Waste Manager, distributed an addendum to Agenda Item I on the formal agenda and described the new Director's Recommendation and the reasons that made the addendum necessary.

4. Audit reply - followup: Fergus O'Donnell, Business Manager, explained the Department's response to the audit comment on the review of the audit report and requested that the Commission agree with the interpretation of the rule. The Commission had no objections or comments.
5. Proposed budget cuts: The Director outlined the potential budget cuts the Department faces at the Special Session, in addition to the cuts in the subsurface program and the loss of federal funds. During the discussion relative to tax credits, the Commission reaffirmed the value of the program.

FORMAL MEETING

Commissioners Richards, Somers, Burgess, and Brill were present for the formal meeting.

AGENDA ITEM A - MINUTES OF THE OCTOBER 9, 1981 MEETING.

AGENDA ITEM B - MONTHLY ACTIVITY REPORT FOR SEPTEMBER AND OCTOBER, 1981

It was MOVED by Commissioner Somers, seconded by Commissioner Burgess, and passed unanimously that the Director's recommendations be approved.

AGENDA ITEM D - PUBLIC FORUM

Steve Shird, Oregonians for Clean Air, read a statement in opposition to the proposed Oregon City resource recovery facility.

Jim Johnson, Oregon City Commissioner and Oregonians for Clean Air, testified in opposition to the lowering of the air quality standards and to allowing the siting of the resource recovery facility in Oregon City.

No one else chose to appear.

AGENDA ITEM E - REQUEST BY JOHN NICKELSON FOR A VARIANCE FROM OAR-340-61-055(4) (a) PERTAINING TO OPERATION OF A SLUDGE LAGOON WITHIN 1/4 MILE OF A RESIDENCE

Mr. John Nickelson has applied for a variance from the Department's solid waste rules to use a lagoon for treatment and disposal of septic tank pumpings near Klamath Falls. The lagoon in question is located in an area approved by the Department. Construction had been completed before it

was determined that the lagoon was approximately 100 feet short of the 1/4-mile setback from a residence as required by our rules.

The Commission's approval of the variance was requested to allow the site to operate as planned; that is, a series of three interconnected lagoons. The location of an intervening ridge and the direction of the prevailing winds make it unlikely that there would be any increased environmental impact on the residence in question.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the Commission grant John Nickelson a variance to OAR 340-61-055(4) (a) for the JNS Disposal Lagoon.

It was MOVED by Commissioner Burgess, seconded by Commissioner Somers, and passed unanimously that the Director's Recommendation be approved.

AGENDA ITEM F - PROPOSED ADOPTION OF TEMPORARY RULE AMENDING RULES FOR ON-SITE SEWAGE DISPOSAL, OAR 340-71-600

Chapter 148, Oregon Laws 1981, revised the statutes to allow applicants seeking a sewage disposal service license to deposit, in lieu of a surety bond, the equivalent value in cash or negotiable securities. Staff have proposed implementation through adoption of a temporary rule that amends the surety bond provisions and provides the methods by which claims may be resolved.

Director's Recommendation

Based upon the summation and the findings, it is recommended that the Commission adopt the proposed temporary rule amending OAR 340-71-600, as set forth in Attachment "B", and instruct staff to include such an amendment in the permanent rule procedures of public hearing, etc., contemplated in the January 1982 rule amendment package.

It was MOVED by Commissioner Somers, seconded by Commissioner Burgess, and passed unanimously that the Director's Recommendation be approved.

AGENDA ITEM G - PROPOSED ADOPTION OF AMENDMENTS TO HAZARDOUS WASTE MANAGEMENT RULES, OAR 340-63-011, 63-125, 63-130 and 63-135

At the October 9, 1981, Commission meeting, the staff presented a proposed amendment to the hazardous waste management rules. The current rules were adopted in May, 1979. A portion of those rules pertain to standards and best management practices for disposal of waste pesticides and their empty containers. The present rules are difficult to interpret, which leads to

inadequate compliance and guidance for acceptable management alternatives to disposal. Questions were raised concerning the Department's broad use of the word "airport" and how the Department planned to distribute the revised rules.

Regarding these issues, the Department's staff has added a new definition, "public-use airport," OAR 340-63-011(27). Addressing the second concern the Department will take several steps to ensure widespread distribution.

The Commission had moved to delay action on the recommendation until this meeting.

Director's Recommendation

Based on the summation, it is recommended that the Commission adopt the proposed amendments set forth in Attachment E to the Commission's Hazardous Waste Management Rules, OAR 340-63-011, 63-125, 63-130 and 63-135, and guidelines.

It was MOVED by Commissioner Burgess, seconded by Commissioner Samers, and passed unanimously that the Director's Recommendation be approved, along with the following addition to page 8 of the proposed rule:

".... Subsequent to March 1, 1982, waste pesticide...."

AND

"....by the Department, pursuant to performance standards adopted by the Commission."

[Underlined portions to be added.]

The Commission also instructed staff to incorporate the present guidelines to the rule and bring the whole rule package (after any public meetings) back before the Commission at the March meeting for the permanent rule adoption.

In unrelated business, the Commission members took this time to present a letter of gratitude to Ray Underwood, Assistant Attorney General, on the occasion of his retirement from the Department of Justice and his position as chief legal counsel to the DEQ.

In other unrelated business, there was discussion regarding the Department's review of the submittal of James F. Nims, P.E., "Proposed Interim Approval Policy for On-Site Sewage Disposal Systems." The Commission instructed the Department staff to make appropriate contact with Mr. Nims regarding his proposed subsurface rules to ensure that they are not mistaken as Department-approved.

AGENDA ITEM C - TAX CREDITS

Tax credit application #1417, Georgia-Pacific Corp., was withdrawn at the request of the company.

It was MOVED by Commissioner Somers, seconded by Commissioner Burgess, and passed unanimously that all tax credit applications be approved except for #1356 (Pioneer International, Inc.) and #1390 (Kaiser Cement Corp.). The Commission chose to defer denial until the next meeting, at which time they would consider those two applications again. The Department staff was instructed to invite those two companies to submit any additional factual information before that time which might support their applications.

AGENDA ITEM H - REQUEST FOR CONCURRENCE: PURCHASE OF CITY OF PORTLAND REVENUE BONDS FOR CONSTRUCTION OF SEWAGE WASTE TREATMENT FACILITIES

The City of Portland has requested the Department to purchase \$5 million of revenue bonds to help finance sludge treatment facilities.

The Department believes it has sufficient resources available in the Bond Fund to carry out legislative intent during the 1981-83 biennium.

This report has been given wide circulation to try to ensure that all interested parties are aware of the availability of funds. We have been requested by MWC to include a further \$12.5 million in the forecast requirements, and a revised page 3 was made available, showing the effect of this.

This revenue issue appears to be adequately secured, and the Department can report that Moody's has rated it A-1.

The Department recommended approval.

Director's Recommendation

Based upon the summation, it is the Director's recommendation that the Commission concur in the purchase of the City of Portland revenue bonds in the amount of \$5 million on the terms and conditions set forth in the attached Bond Purchase Agreement.

It was MOVED by Commissioner Somers, seconded by Commissioner Brill, and passed unanimously that the following language be added on page 7, Section D.1. of the Agreement:

"....and obtain independent review of the audit information at the expense of the public agency...."

John Lang, Portland City Engineer, and Mark Gardiner, City Fiscal Office, appeared on behalf of Commissioner Mike Lindberg to discuss this sale with the Commission.

It was MOVED by Commissioner Burgess, seconded by Commissioner Somers, and passed unanimously that the following language be added on page 6, Item 13, subsection ii:

".... If the agency deems itself insecure or if the public agency fails to pay...."

[Underlined portion is to be added.]

It was MOVED by Commissioner Burgess, seconded by Commissioner Brill, and passed that the Director's Recommendation, with the above amendments, be approved.

Commissioner Somers voted no.

In connection with the above discussion, the Commission asked staff to provide for them an analysis of the lien priority discussion and the effects on future bond sales.

AGENDA ITEM I - PUBLIC MEETING: OREGON'S HAZARDOUS SUBSTANCES RESPONSE PLAN

To implement Superfund, EPA is directed to develop a National Hazardous Substance Response Plan including a list of the top 400 sites in need of immediate cleanup through either emergency response or remedial action. States are to play a key role in identifying sites by developing their own Hazardous Substance Response Plan and submitting a list of candidate sites to EPA. To ensure consistency between states, EPA contracted with the Mitre Corp. to develop a degree-of-hazard ranking model to be used by all states.

Over the last two years, DEQ and EPA Region X have investigated 82 sites and concluded in most cases that no existing or potential health hazards or environmental threat from past disposal practices exist. From those cases, 10 sites were ranked using the Mitre Model. These 10 sites represented those with the highest potential for some type of cleanup action.

In consideration of the overall relative rankings, that additional groundwork information is being collected in three cases through company financial programs under our supervision and especially that a responsible party is identified in all cases, the Department recommended that no candidate sites be submitted for this year.

The Department intends to continue to work with EPA on the uncontrolled site program and to continue to pursue implementation of all facets of Superfund as they may positively benefit Oregon's environment.

This meeting of the EQC was intended to satisfy an EPA requirement for a public meeting (not hearing) on the State's Hazardous Substance Response Plan.

Director's Recommendation

The Director recommended to the Commission that this matter be heard as an informational item instead of a public meeting. He further recommended that public comment still be received on the substance of the plan, since our notice implied that this matter was open for public comment.

Staff will bring this item before the Commission again for consideration in late spring of 1982.

Though testimony was solicited, there were no witnesses to testify. The Commission accepted the report.

In an unscheduled item, Mike Downs, Management Services Administrator, outlined for the Commission the proposed budget cuts and the schedule for submission to the Executive Department. The Director outlined for the group the proposed cuts in 5% increments.

The Commission asked the Director to point out to the Governor those program cuts which might affect any turnaround in the general economy of the state.

AGENDA ITEM J - TESTIMONY BEFORE THE EQC

Some confusion exists on the part of the staff and the public as to when and whether the Commission will receive testimony on any given agenda item. The issue to be addressed is: Can an equivalent degree of availability be maintained while making more clear to all concerned when the Commission might limit testimony?

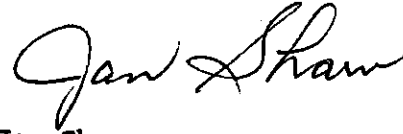
It was RESOLVED by Commissioner Somers, seconded by Commissioner Burgess, and passed unanimously that a policy decision be established as follows:

The staff will add new and different language to the next two agendas which might be effective as an aid to staff in advising the public on the Commission's policy for accepting testimony at their regular meetings.

The Commission withdrew into Executive Session to discuss personnel matters.
No action was required nor taken.

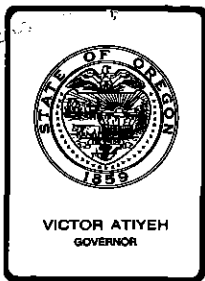
There being no further business, the meeting was adjourned.

Respectfully submitted,

A handwritten signature in cursive script that reads "Jan Shaw".

Jan Shaw
Commission Assistant

JS:j (k)



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. B, January 22, 1982, EQC Meeting
November, 1981, Program Activity Report

Discussion

Attached is the November, 1981, Program Activity Report.

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

Water Quality and Solid Waste facility plans and specifications approvals or disapprovals and issuance, denials, modifications and revocations of air, water and solid waste 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 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 contaminant source plans and specifications; and
- 3) to provide logs of civil penalties assessed and status of DEQ/EQC 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.

William H. Young
William H. Young
Director

M. Downs:k
229-6485
November 12, 1981
Attachments
MA98 (2)

DEPARTMENT OF ENVIRONMENTAL QUALITY

Monthly Activity Report

November, 1981

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DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

AQ, WQ, SW Divisions (Reporting Unit)	November, 1981 (Month and Year)
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SUMMARY OF PLAN ACTIONS

	Plans Received		Plans Approved		Plans Disapproved		Plans Pending
	Month	FY	Month	FY	Month	FY	
<u>Air</u>							
Direct Sources	5	37	8	43	0	0	40
Small Gasoline Storage Tanks Vapor Controls	0	0	0	0	0	0	0
TOTAL	5	37	8	43	0	0	40
<u>Water</u>							
Municipal	17	162	8	135	0	0	20
Industrial	5	21	6	25	0	0	12
TOTAL	22	183	14	160	0	0	32
<u>Solid Waste</u>							
Gen. Refuse	2	29	2	25	0	0	13
Demolition	0	6	1	6	0	0	2
Industrial	0	7	0	10	0	1	3
Sludge	0	3	0	3	0	0	0
TOTAL	2	45	3	44	0	1	18
<u>Hazardous Wastes</u>							
	-	-	-	-	-	-	-
GRAND TOTAL	29	265	25	247	0	1	90

MAR. 2 (4/79)

(MK366) (2)

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIRECT SOURCES - PERMIT APPLICATIONS PENDING SECTION

STATUS ABBREVIATIONS

APPL SUB - RO - Application Submitted to Regional Office for Permit Drafting.
APPL SUB - PO - Application Submitted to Program Operations for Permit Drafting.
APPL SUB - PP & DA - Application Submitted to Program Planning and Development for Permit Drafting.
PMT DRETD - NPN - Permit Drafted - Waiting for Next Public Notice Issue.
PUB NOT ISSUED - Proposed Permit on Public Notice and Applicant Review.

TYPE OF APPLICATION ABBREVIATIONS

EXT - Existing Source
NEW - New Source
RNW - Renewal Source
MOD - Modified Source

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
MONTHLY ACTIVITY REPORT

Direct Sources

PLAN ACTIONS COMPLETED

County	Number	Source	Process Description	Date of	
				Action	Action
JACKSON	738	EARNEST ORCHARDS	WIND MACHINE INSTALLATION	10/27/81	APPROVED
CLACKAMAS	746	OREGON PORTLAND CEMENT	TRUCK WASH RACK	11/18/81	APPROVED
UNION	767	DEL MONTE CORP PLANT 181	DUST COLLECTION SYSTEM	11/16/81	APPROVED
CLACKAMAS	794	FOSECO, INC.	PANEL SAW & DUST COLLECTOR	10/29/81	APPROVED
LINN	795	OREMET	HCL BURNER SCRUBBER	11/12/81	APPROVED
PORT.SOURCE	796	WESTERN SURFACING, INC.	SCRUBBER INSTAL	10/29/81	APPROVED
LINN	799	ALBANY TITANIUM INC	TITANIUM MFG PLANT	11/02/81	APPROVED
WASHINGTON	782	TEKTRONIX	WASTE ACETONE COLL. SYS.	10/19/81	APPROVED

DEPARTMENT OF ENVIRONMENTAL QUALITY
 AIR QUALITY DIVISION
 MONTHLY ACTIVITY REPORT

CERTIFICATES ISSUED FOR GASOLINE DELIVERY TRUCKS
 PRESSURE - VACUUM TESTED; NON-PERMITTED VOC SOURCES

COUNTY	I.D. NUMBER	OWNER/OPERATOR	TANK NO.	EXPIRATION DATE
MULTNOMAH	26 V419	ARMOUR OIL CO.	65A	10/19/82
			654	10/19/82
			165	10/19/82
MULTNOMAH	26 V057	ARROW TRANSPORTATION CO.	253	11/16/82
			828	11/10/82
			729	11/10/82
			830	11/10/82
			731	11/10/82
			83A	11/12/82
			675	11/13/82
			742	11/13/82
			782	11/12/82
			132	11/13/82
			741	11/13/82
			840	11/16/82
			836	11/16/82
			737	11/16/82
			764	11/18/82
			703	11/18/82
			820	10/23/82
			743	10/23/82
			752	10/27/82
			685	10/27/82
			653	10/21/82
			784	10/21/82
			164	11/01/82
81A	11/01/82			
733	11/02/82			
697	11/02/82			
738	11/02/82			
739	11/03/82			
858	11/03/82			
788	11/04/82			
82A	11/04/82			
814	11/05/82			
719	11/05/82			
699	11/06/82			
700	11/06/82			
LANE	20 V001	CHEVRON U. S. A., INC.	94	10/15/82
			68	10/15/82
LINN	22 V002	CUMMINGS TRANSFER	35T	10/28/82
MULTNOMAH	26 V512	LEE & EASTES TANK LINES	135	10/28/82
			165	11/18/82
MULTNOMAH	26 V056	LEE & EASTES TNK (ASBURY)	243	10/28/82
MARION	24 V036	OIL PRODUCTS INC.	69	10/28/82
			832	10/29/82
			4A	10/23/82

DEPARTMENT OF ENVIRONMENTAL QUALITY
 AIR QUALITY DIVISION
 MONTHLY ACTIVITY REPORT

CERTIFICATES ISSUED FOR GASOLINE DELIVERY TRUCKS
 PRESSURE - VACUUM TESTED; NON-PERMITTED VOC SOURCES

COUNTY	I.D. NUMBER	OWNER/OPERATOR	TANK NO.	EXPIRATION DATE	
MARION	24	V036	OIL PRODUCTS INC.	4	10/21/82
MARION	24	V051	PETROLEUM TRANSPORT, INC.	P7	11/10/82
			7R	11/10/82	
			12R	11/11/82	
			P12	11/11/82	
MARION	24	V053	ROY LUMBER	149	11/16/82
			1A	11/16/82	
MULTNOMAH	26	V330	SHELL OIL CO.	132	11/13/82
PORT.SOURCE	37	V009	SHIPPERS COOP ASSOCIATION	22A	11/03/82
MULTNOMAH	26	V328	TEXACO INC.	473	10/22/82
			470	10/29/82	
			474	10/23/82	
MULTNOMAH	26	V331	WESTERN HIGHWAY OIL CO.	2B	10/26/82
			2	10/26/82	

TOTAL NUMBER QUICK LOOK REPORT LINES 61

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Air Quality Division
(Reporting Unit)

November, 1981
(Month and Year)

SUMMARY OF AIR PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sources Under Permits	Sources Reqr'g Permits
	<u>Month</u>	<u>FY</u>	<u>Month</u>	<u>FY</u>			
<u>Direct Sources</u>							
New	1	15	0	5	24		
Existing	2	13	1	9	19		
Renewals	13	56	6	24	80		
Modifications	4	8	0	16	9		
Total	20	92	7	54	132	2012	2055
<u>Indirect Sources</u>							
New	0	6	2	7	2		
Existing	0	0	0	0	0		
Renewals	0	0	0	0	0		
Modifications	0	3	1	3	0		
Total	0	9	3	10	2	197	199
<u>GRAND TOTALS</u>	20	101	10	64	134	2209	2254

Number of
Pending Permits

Comments

22	To be drafted by Northwest Region
13	To be drafted by Willamette Valley Region
3	To be drafted by Southwest Region
4	To be drafted by Central Region
4	To be drafted by Eastern Region
6	To be drafted by Program Planning Division
25	To be drafted by Program Operations
6	Awaiting Public Notice
49	Awaiting the end of the 30-day period
<u>132</u>	TOTAL

DEPARTMENT OF ENVIRONMENTAL QUALITY
 AIR QUALITY DIVISION
 MONTHLY ACTIVITY REPORT
 PERMITS ISSUED

DIRECT STATIONARY SOURCES

COUNTY	SOURCE	PERMIT NUMBER	APPLIC. RECEIVED	STATUS	DATE ACHIEVED	TYPE OF APPLICATION
BENTON	WILLAMETTE INDUSTRIES	02	7070 06/10/81	PERMIT ISSUED	11/02/81	RNW
CLATSOP	NORM SAARHEIM	04	0048 06/25/81	PERMIT ISSUED	11/02/81	RNW
COLUMBIA	LITTLE D LUMBER CO. INC.	05	2551 06/29/81	PERMIT ISSUED	11/02/81	EXT
LINN	YOUNG & MORGAN LUMBER CO	22	2520 06/03/81	PERMIT ISSUED	11/02/81	RNW
POLK	BOISE CASCADE CORP	27	4078 12/08/80	PERMIT ISSUED	11/02/81	RNW
POLK	STUIVENGA BOX MILL	27	8005 06/09/81	PERMIT ISSUED	11/02/81	RNW
PORT.SOURCE	WESTERN SURFACING, INC.	37	0047 06/26/81	PERMIT ISSUED	11/02/81	RNW
TOTAL NUMBER QUICK LOOK REPORT LINES				7		

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

<u>Air Quality Division</u>	<u>November, 1981</u>
(Reporting Unit)	(Month and Year)

PERMIT ACTIONS COMPLETED

Indirect Source

* County	* Name of Source/Project	* Date of	* Action
*	* /Site and Type of Same	* Action	*
*	*	*	*
Josephine	Redwood Plaza 2320 Spaces File No. 17-7936	11/17/81	Final Permit Issued
Clackamas	Sunnyside Road I-205 to SE 122nd File NO. 03-8111		Final Permit Issued
Washington	Washington Square Temporary Parking Lot #2 (Approx 380 Spaces) File No. 34-6022 (Modification)		Final Permit Issued

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality
(Reporting Unit)

November 1981
(Month and Year)

PLAN ACTIONS COMPLETED - 14

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	* *
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MUNICIPAL WASTE SOURCES (8)

Clatsop	Knappa Mobile Home Park Sanitary Sewers Knappa	11/10/81	Verbal Comments to Regional Office 11/10/81
Lincoln	Little Whale Cove Phase 3 Sanitary Sewers Depoe Bay	11-12-81	P.A.
Lane	Phase C Sewer Construction Lowell	11-12-81	P.A.
Deschutes	Fort Rock Hill Subdivision Sanitary Sewers Sunriver	11-12-81	P.A.
Lincoln	West Devils Lake Apartments Sanitary Sewers Lincoln City	11-12-81	P.A.
Coos	Sun Lake Apartments Sanitary Sewers City of Lakeside	11-12-81	P.A.
Multnomah	N.E. Airport Way Sanitary Sewers City of Portland	11-12-81	P.A.
Lincoln	Horizon Hill Drive Sanitary Sewers Yachats	11-15-81	P.A.

P.A. - Provisional Approval

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

<u>Water Quality Division</u>	<u>November 1981</u>
(Reporting Unit)	(Month and Year)

PLAN ACTIONS COMPLETED 14

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

INDUSTRIAL WASTE SOURCES 6

Multnomah	Reynolds Metals Co. New Waste Treatment System	11/5/81	Approved
Tillamook	Steve Neahring, Tillamook Animal Manure Storage Bunker	11/13/81	Approved
Tillamook	O. L. Bullock, Tillamook Animal Manure Storage Facility	11/23/81	Approved
Umatilla	J. R. Simplot Silt Removal System for Potato Wash	11/23/81	Approved
Wasco	Stadlelman Fruit, The Dalles Modification to biological treatment and brine reuse system	11/25/81	Approved
Lane	The Murphy Co., Florence Vat Recycle System	11/25/81	Approved

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division
(Reporting Unit)

November, 1981
(Month and Year)

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 /2	1 /8	1 /0	1 /6	3 /8		
Existing	0 /0	0 /0	0 /0	0 /0	0 /0		
Renewals	3 /3	27 /10	6 /1	23 /15	23 /9		
Modifications	0 /0	1 /0	1 /0	4 /1	2 /0		
Total	3 /5	29 /18	8 /1	28 /22	28 /17	245/101	248/109
<u>Industrial</u>							
New	0 /0	2 /4	1 /0	3 /10	3 /16		
Existing	0 /0	0 /0	0 /0	0 /0	0 /1		
Renewals	4 /2	35 /15	1 /0	10 /11	52 /20		
Modifications	1 /0	5 /0	0 /0	6 /2	2 /0		
Total	5 /2	42 /19	2 /0	19 /23	57 /37	369/173	372/190
<u>Agricultural (Hatcheries, Dairies, etc.)</u>							
New	0 /0	0 /0	0 /0	0 /0	1 /0		
Existing	0 /0	0 /0	0 /0	0 /0	0 /0		
Renewals	0 /0	1 /0	0 /0	1 /0	0 /0		
Modifications	0 /0	0 /0	0 /0	0 /0	0 /0		
Total	0 /0	1 /0	0 /0	1 /0	1 /0	53 /19	54 /19
<u>GRAND TOTALS</u>	8 /7	72 /37	10 /1	48 /45	86 /54	667/293	674/318

* NPDES Permits
 ** State Permits
 *** Two General Permits Issued.
 One WPCF Permit Cancelled.

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division (Reporting Unit)	November, 1981 (Month and Year)
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PERMIT ACTIONS COMPLETED

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	*
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MUNICIPAL AND INDUSTRIAL SOURCES - NPDES PERMITS (9)

Benton	Adair Village, STP	11/6/81	Permit Renewed	
Benton	Boise Cascade Adair Div., STP	11/6/81	Permit Renewed	
Jackson	Callahan's Siskiyou Lodge, STP	11/6/81	Permit Renewed	
Multnomah	Crown Zellerbach Portland, (Flex. Pkg.)	11/6/81	Permit Renewed	
Umatilla	Umatilla, STP	11/6/81	Permit Renewed	
Jackson	White Oak Mobile Park Trail, STP	11/6/81	Permit Renewed	
Josephine	Manzanita Elem. & Fleming Middle School (Josephine Co. School Dist.), STP	11/20/81	Permit Renewed	
Josephine	Caleb L. Wade, dba WE ASK U INN, Grants Pass, STP	11/20/81	Permit Issued	
Multnomah	Owens-Corning Fiberglass (Trumbull Asphalt), Portland	11/20/81	Permit Issued	

MAR.6 (5/79) WG693 (1)

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Water Quality Division (Reporting Unit)	November, 1981 (Month and Year)
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PERMIT ACTIONS COMPLETED

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

MUNICIPAL AND INDUSTRIAL SOURCES - STATE PERMITS (1)

Lincoln	Oregon Dept. of Trans. Beverly Beach St. Park, STP	11/20/81	Permit Renewed
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MUNICIPAL AND INDUSTRIAL SOURCES - MODIFICATIONS (1)

Multnomah	Hayden Island, Inc. Portland, STP	11/6/81	Addendum #1
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MUNICIPAL & INDUSTRIAL SOURCES GENERAL PERMITS (2)

Cooling Water - New Permit No. 0100-J, File 32539 (1)

Multnomah	Anodizing, Inc. Portland	11/25/81	Transferred to General Permit
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Log Ponds - New Permit No. 0400-J, File No. 32544 (1)

Lane	Davidson Ind. Inc. Mapleton (Tide Mill)	11/30/81	Transferred to General Permit
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MAR.6 (5/79) WG693 (1)

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division
(Reporting Unit)

November 1981
(Month and Year)

SUMMARY OF SOLID AND HAZARDOUS WASTE PERMIT ACTIONS

	Permit Actions Received		Permit Actions Completed		Permit Actions Pending	Sites Under Permits	Sites Reqr'g Permits
	Month	FY	Month	FY			
<u>General Refuse</u>							
New	2	12	-	5	6		
Existing	-	2	-	4	2		
Renewals	-	72	3	61	17		
Modifications	-	9	-	19	3		
Total	2	95	3	89	28	166	166
<u>Demolition</u>							
New	-	4	-	7	-		
Existing	-	2	-	-	1		
Renewals	-	4	-	5	2		
Modifications	-	2	-	4	-		
Total	-	12	-	16	3	21	21
<u>Industrial</u>							
New	1	15	-	15	4		
Existing	-	3	-	-	-		
Renewals	-	31	1	37	11		
Modifications	-	4	1	5	-		
Total	1	53	2	57	15	101	101
<u>Sludge Disposal</u>							
New	-	5	-	6	-		
Existing	-	-	-	1	-		
Renewals	1	4	-	2	2		
Modifications	-	-	-	1	-		
Total	1	9	-	10	2	15	15
<u>Hazardous Waste</u>							
New	32	545	32	545	-		
Authorizations	-	-	-	-	-		
Renewals	-	-	-	-	-		
Modifications	-	-	-	-	-		
Total	32	545	32	545	-	1	1
<u>GRAND TOTALS</u>							
	36	714	37	717	48	304	304

SC126.A
MAR.55 (4/79)

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division (Reporting Unit)	November 1981 (Month and Year)
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PERMIT ACTIONS COMPLETED

* County	* Name of Source/Project * /Site and Type of Same	* Date of * Action	* Action	*
Gilliam	South Gilliam County Existing Site	11-18-81	Permit Issued	*
Gilliam	Arlington Existing Site	11-20-81	Permit Issued	*
Douglas	Canyonville Transfer Sta. Existing Site	11-20-81	Permit Issued	*
Klamath	Gilchrist Timber Existing Site	11-20-81	Permit Amended	*
Jackson	Denman Wildlife Area Existing Site	11-25-81	Permit Issued	*

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division
(Reporting Unit)

November, 1981
(Month and Year)

HAZARDOUS WASTE DISPOSAL REQUESTS

CHEM-NUCLEAR SYSTEMS, GILLIAM CO.

		<u>WASTE DESCRIPTION</u>		
* Date *	Type	* Source *	* Quantity *	
* *	* *	* *	Present *	Future *
DISPOSAL REQUESTS GRANTED (29)				
OREGON (7)				
10/28	Out-dated products consisting of paint, tire cleaner, glass cleaner, refrigerant, anti-freeze, solvents, etc.	Auto Parts Supplier	16 drums	12 drums
10/28	Lab samples of chloroform and pesticides	Pesticide Formulator	5 drums	5 drums
11/9	Lead and cadmium bearing electric furnace fume dust	Steel Production	150 cu. yd.	19 cu. yd.
11/10	Penta sludge	Wood Treatment	0	48 drums
11/12	Noxtane sludge	Wood Treatment	0	5,000 gal.
11/18	Lead-battery acid	Telephone Co.	0	10,000 gal.
11/18	PCB transformers	Oil Co.	12.5 ft. ³	0

MAR.15 (4/79) SG709 (1)

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division
(Reporting Unit)

November, 1981
(Month and Year)

HAZARDOUS WASTE DISPOSAL REQUESTS

CHEM-NUCLEAR SYSTEMS, GILLIAM CO.

WASTE DESCRIPTION

* Date *	Type	* Source *	* Quantity *	
* * *	* * *	* * *	Present	Future
WASHINGTON (13)				
10/26	Sodium dichromate and zinc sulfate	Oil Co.	10 drums	0
10/26	Mineral acid salts and nickle plating solution	Electronic Company	0	700 gal.
10/28	Urea - formaldehyde resin	Chemical Co.	30 drums	0
11/2	Freon, fluorosilic acid, triethylene glycol, tetra-chloroethylene, etc.	Federal Agency	0	130 drums
11/4	Heavy metals contaminated PVC ducting	Aerospace Co.	0	40 cu. yd.
11/9	PCB contaminated materials	Research Lab.	2 drums	1 drum
11/12	PCB contaminated rain water	Ship Building	0	10 drums
11/12	PCB contaminated oil	Ship Building	0	10 drums
11/13	Creosote sludge and contaminated soil	Spill cleanup	10 cu yd.	0

MAR.15 (4/79) SG709 (1)

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division
(Reporting Unit)

November, 1981
(Month and Year)

HAZARDOUS WASTE DISPOSAL REQUESTS

CHEM-NUCLEAR SYSTEMS, GILLIAM CO.

		<u>WASTE DESCRIPTION</u>			<u>Quantity</u>	
* Date *	Type	Source	Present	Future		
11/13	Contaminated phenol crystal	Solvent Recovery	4 drums	12 drums		
11/16	Methylene chloride/chloroform/hexane	Chemical Co.	0	100 gal.		
11/18	Slop pit sludge with heavy metals	Industrial Cleaning Ser.	0	500 gal.		
11/18	Polyurethane paint sludge with toluene, xylene, MIBK	Paint Mfg.	7 drums	10 drums		
OTHER STATES (9)						
10/28	PCB contaminated diesel oil, mineral oil, etc. (Idaho)	Chemical Co.	0	83 drums		
11/2	Arsenic contaminated sludge and coal tar contaminated sawdust (Weed, California)	Wood Treatment	5,254 gal	100 drums		
11/2	Chlorinated hydrocarbons contaminated coke (B.C.)	Wood Treatment	4 drums	4 drums		
11/2	Arsenic contaminated sludge (B.C.)	Wood Treatment	18 drums	0		

MAR.15 (4/79) SG709 (1)

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Solid Waste Division
(Reporting Unit)

November, 1981
(Month and Year)

HAZARDOUS WASTE DISPOSAL REQUESTS

CHEM-NUCLEAR SYSTEMS, GILLIAM CO.

		<u>WASTE DESCRIPTION</u>			<u>Quantity</u>	
* Date *	* Type *	* Source *	* Present *	* Future *	* * *	* * *
11/2	PCB transformers and petroleum tank bottoms (alaska)	Oil Company	7 drums	0		
11/12	Petroleum dye product (B.C.)	Government Agency	3 drums	0		
11/13	Chromated copper arsenate contaminated sawdust (B.C.)	Wood Treatment	36 drums	20 drums		
11/18	PCB transformers, capacitors, PCB liquid (Alaska)	Electric Utility	66 units & 30 gal.	6 units & 2 drums		
11/18	Obsolete lab chemicals (B.C.)	University	60 drums	0		

DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY ACTIVITY REPORT

Noise Control Program
(Reporting Unit)

November, 1981
(Month and Year)

SUMMARY OF NOISE CONTROL ACTIONS

Source Category	New Actions Initiated		Final Actions Completed		Actions Pending	
	Mo.	FY	Mo.	FY	Mo.	Last Mo.
Industrial/ Commercial	1	7	1	5	64	64
Airports			1	6		

MONTHLY ACTIVITY REPORT

Noise Control Program
(Reporting Unit)

November, 1981
(Month and Year)

FINAL NOISE CONTROL ACTIONS COMPLETED

* County	* Name of Source and Location	* Date	* Action
Lincoln	Hatfield Heliport Newport	11/81	Boundary Approved
Malheur	Paul's IGA Ontario	11/81	In Compliance

CIVIL PENALTY ASSESSMENTS

DEPARTMENT OF ENVIRONMENTAL QUALITY
1981

CIVIL PENALTIES ASSESSED DURING MONTH OF NOVEMBER, 1981:

<u>Name and Location of Violation</u>	<u>Case No. & Type of Violation</u>	<u>Date Issued</u>	<u>Amount</u>	<u>Status</u>
Roger DeJager Marion County	WQ-NWR-81-105 Discharged silage liquor into Bashaw Creek.	11-3-81	\$500	In default.
Wendell Sperling dba/ W. P. Sperling Farms Polk County	AQ-FB-81-15 Burned unregistered acreage and without a permit.	11-3-81	\$3,000	Request for hearing and answer filed.
Michael Stanton Marion County	AQOB-WVR-81-103 Open burned pro- hibited materials.	11-3-81	\$400	Mitigation request to be presented to EQC on 1-22-82.
Wheels I Multnomah	AQOB-NWR-81-113 Open burned commercial wastes.	11-3-81	\$50	In default.
Erman LaFayette Polk County	AQ-FB-81-14 Failure to fluff field.	11-3-81	\$500	Paid.
Harold Leonard Clackamas County	AQOB-NWR-81-112 Open burned prohibited materials.	11-9-81	\$100	Paid.
Tucker Creek Const., Inc. Clatsop County	SS-NWR-81-108 Installed on-site SDS without being licensed.	11-9-81	\$100	Awaiting service.
John Davis Polk County	SS-WVR-81-115 Installed on-site SDS without license and permit.	11-13-81	\$200	Awaiting confirmation of service.
Leroy Schrock Linn County	AQ-FB-81-16 Failure to monitor schedule broadcast.	11-20-81	\$300	Awaiting response to notice.
Marvin DeRaeve Yamhill County	AQ-FB-81-17 Burned unregistered acreage and without a permit.	11-20-81	\$3,000	Awaiting response to notice

CIVIL PENALTY ASSESSMENTS

DEPARTMENT OF ENVIRONMENTAL QUALITY
1981

CIVIL PENALTIES ASSESSED DURING MONTH OF NOVEMBER, 1981:

<u>Name and Location of Violation</u>	<u>Case No. & Type of Violation</u>	<u>Date Issued</u>	<u>Amount</u>	<u>Status</u>
Eugene Delplanche Washington County	AQ-FB-81-13 Burned without a permit	11-20-81	\$1,500	Hearing request filed.
Ralph Holzapel Linn County	AQ-FB-81-12 Late field burning.	11-20-81	\$1,000	Awaiting response to notice.
Rex Ruckert Linn County	AQ-FB-81-11 Late field burning.	11-20-81	\$1,000	Awaiting response to notice.
Carl Warden Linn County	AQ-FB-81-10 Late field burning.	11-20-81	\$1,000	Awaiting response to notice.
Maintain, Inc. Washington County	AQOB-NWR-81-17 Open burned land clearing debris.	11-20-81	\$300	Corporation in bankruptcy.
Regional Clearing, Inc. Washington County	AQOB-NWR-81-122 Open burned land clearing debris.	11-20-81	\$300	Paid.

GO581 (1)

<u>ACTIONS</u>	<u>LAST MONTH</u>	<u>PRESENT</u>
Preliminary Issues	8	7
Discovery	0	0
Settlement Action	2	3
Hearing to be scheduled	3	5
Hearing scheduled	0	0
HO's Decision Due	4	3
Briefing	0	0
Inactive	4	2
 SUBTOTAL of Active Files	 <u>21</u>	 <u>20</u>
HO's Decision Out/Option for EQC Appeal	0	1
Appealed to EQC	1	1
EQC Appeal Complete/Option for Court Review	1	0
Court Review Option Pending or Taken	1	1
Case Closed	2	1
 TOTAL Cases	 <u>26</u>	 <u>24</u>
15-AQ-NWR-76 -178	15th Hearing Section case in 1976 involving Air Quality Division violation in Northwest Region jurisdiction in 1976; 178th enforcement action in Northwest Region in 1976.	
ACDP	Air Contaminant Discharge Permit	
AQ	Air Quality	
CLR	Chris Reive, Enforcement Section	
DEC Date	Date of either a proposed decision of hearings officer or a decision by Commission	
\$	Civil Penalty Amount	
ER	Eastern Region	
Fld Brn	Field Burning incident	
RLH	Robb Haskins, Assistant Attorney General	
Hrngrs	Hearings Section	
Hrngr Rfrl	Date when Enforcement Section requests Hearing Section schedule a hearing	
VAK	Van Kollias, Enforcement Section	
LMS	Larry Schurr, Enforcement Section	
MWR	Midwest Region (now WVR)	
NP	Noise Pollution	
NPDES	National Pollutant Discharge Elimination System wastewater discharge permit.	
NWR	Northwest Region	
FWO	Frank Ostrander, Assistant Attorney General	
OSS	On-Site Sewage	
P	Litigation over permit or its conditions	
Prtys	All parties involved	
Rem Order	Remedial Action Order	
Resp Code	Source of next expected activity in case	
SW	Solid Waste Division	
SWR	Southwest Region	
T	Litigation over tax credit matter	
Transcr	Transcript being made of case	
<u>Underlining</u>	New status or new case since last month's contested case log	
WVR	Willamette Valley Region	
WQ	Water Quality Division	

November 1981

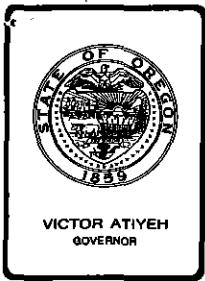
DEQ/EQC Contested Case Log

Pet/Resp Name	Hrng Rqst	Hrng Rfrrl	DEQ Atty	Hrng Date	Resp Code	Case Type & No.	Case Status
FAVRETT, INC.	05/75	05/75	RLH	11/77	Resp	03-SS-SWR-75-02 64-SSB-Permits	<u>Case closed 11/10/81. No notice of appeal filed.</u>
MEAD and JOHNS, et al	05/75	05/75	RLH		All	04-SS-SWR-75-03 3 SSD Permits	<u>Next step to be determined in concert with counsel</u>
POWELL, Ronald	11/77	11/77	RLH	01/23/80	Hrgs	\$10,000 Fld Brn 12-AQ-MWR-77-241	<u>Decision drafted.</u>
WAH CHANG	04/78	04/78	RLH		Prtys	16-P-WQ-WVR-78-2849-J NPDES Permit Modification	Current permit in force. Hearing deferred.
WAH CHANG	04/78	04/78	RLH		Prtys	08-P-WQ-WVR-78-2012-J NPDES Permit Modification	Current permit in force. Hearing deferred.
M/V TOYOTA MARU No. 10	12/10/79	12/12/79	RLH		Hrgs	17-WQ-NWR-79-127 Oil Spill Civil Penalty of \$5,000	Ruling due on requests for partial summary judgment.
LAND RECLAMATION, INC., et al	12/12/79	12/14/79	FWO	05/16/80		19-P-SW-329-NWR-79 Permit Denial	Petition for Supreme Court review filed.
MEDFORD CORPORATION	02/25/80	02/29/80		05/16/80	Prtys	07-AQ-SWR-80 Request for Declaratory Ruling	Parties attempting to affect compromise
LOGSDON, Elton	11/12/80	11/14/80	CLR	02/26/81	Resp	30-AQ-WVR-80-164 Field Burning Civil Penalty of \$950	<u>Decision issued 12/8/81.</u>
MORRIS, Robert	11/10/80	11/14/80	RLH		Resp	31-SS-CR-80 Permit revocation	Summary Judgment ruling deferred at Respondent's request 10/6/81.
HAYWORTH, John W. dba/HAYWORTH FARMS INC.	12/02/80	12/08/80	LMS	04/28/81	Hrgs	33-AQ-WVR-80-187 Field burning civil penalty of \$4,660	Record closed. Decision due.
HOPPER, Harold	12/09/80	12/09/80	RLH		Resp	36-SS-NWR-80-197 Permit revocation	Dept's Motion for Summary Judgment filed 9/11/81.
JENSEN, Carl F. dba/JENSEN SEED & GRAIN INC.	12/19/80	12/24/80	CLR	04/16/81	Hrgs	37-AQ-WVR-80-181 Field burning civil penalty of \$4,000	Resp. appealed to EQC. Exceptions & brief due 12/16/81.
JAL CONSTRUCTION, INC.	02/06/81	02/09/81	LMS	06/12/81	Hrgs	06-AQOB-NWR-81-02 Open burning civil penalty of \$3000	<u>Decision due.</u>
CURL, James H., et al	02/09/81	02/12/81			Prtys	07-SS-CR-81 Request for Declaratory Ruling	Attempting informal resolution.
OREGON SHORES ASSOCIATES, LTD.	02/11/81	03/09/81	RLH		Prtys	09-WQ-NWR-81	To be scheduled.
MAIN ROCK PRODUCTS, INC	03-11-81	03-16-81	CLR		Prtys	10-WQ-SWR-81-16 Water Quality civil penalty of \$6,000	Settlement effort continues.
MEAD, Mel	04-04-81	04-08-81	LMS		Hrgs	13-SS-SWR-81-25 14-SS-SWR-81-26 Subsurface sewage permit denial	To be scheduled
Pullen, Arthur W. dba/Lakes Mobile Home Park	07-15-81	07-15-81	CLR		Hrgs	16-WQ-CR-81-60	To be scheduled for December hearing.
WESTERN SURFACING, INC.	09-09-81	09-09-81	LMS		Prtys	18-AQ-NWR-81-79	Preliminary issues.
FRANK, Victor	09-23-81	09-23-81	CLR		Prtys	19-AQ-FB-81-05 FB civil penalty of \$1,000	Preliminary issues.

November 1981

DEQ/EQC Contested Case Log

<u>Pet/Resp Name</u>	<u>Hrng Rqst</u>	<u>Hrng Rfrl</u>	<u>DEQ Atty</u>	<u>Hrng Date</u>	<u>Resp Code</u>	<u>Case Type & No.</u>	<u>Case Status</u>
GATES, Clifford	10-06-81		CLR		<u>Hrgs</u>	21-SS-SWR-81-90	<u>To be scheduled.</u>
LANGDON, George	10-13-81		CLR		<u>Hrgs</u>	22-AQ-FB-81-04	<u>To be scheduled.</u>
<u>SPERLING, Wendell dba/Sperling Farms</u>	<u>11-25-81</u>	<u>11-25-81</u>	<u>CLR</u>		<u>Prtys</u>	<u>23-AQ-FB-81-15 FB Civil Penalty of \$3,000</u>	<u>Preliminary issues.</u>



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item C, January 22, 1981, EQC Meeting

TAX CREDIT APPLICATIONS

Director's Recommendation

It is recommended the Commission take the following actions:

1. Issue Pollution Control Facility Certificates to:

<u>Appl</u> <u>No.</u>	<u>Applicant</u>	<u>Facility</u>
T-1465	Chembond Corporation	Pump-out pipeline and loading system
T-1466	Chembond Corporation	Lignin liquor transfer system
T-1468	Weyerhaeuser Company	Spill control system
T-1469	Weyerhaeuser Company	PCB containment building
T-1470	Weyerhaeuser Company	Tank and metering pump
T-1472	Weyerhaeuser Company	Wastewater pH neutralization system
T-1481	Homette Corporation	Concrete block noise barrier

2. Revoke Pollution Control Facility Certificates 453 and 521 issued to Georgia-Pacific Corporation as the certified facilities have been sold (see review report).



Contains
Recycled
Materials

3. At the Commission's meeting on December 4, 1981, they requested the Department inform two applicants for tax credit who were requesting waiver of the preliminary certification requirement that the Commission intended to deny their request and not approve their applications unless the applicants could provide more detailed information about the special circumstances which would warrant approval. The Department so informed the applicants and to date have not received any further information from them.

It is therefore recommended that the Commission deny the following two requests for waiver of preliminary certification and approval of final tax credit applications.

<u>Appl No.</u>	<u>Applicant</u>	<u>Facility</u>
T-1356	Pioneer International Inc.	Conversion of a gasoline delivery trailer to comply with VOC regulations
T-1390	Kaiser Cement Corporation	Six baghouse filters

Attached are the review reports presented at the December 4, 1981 EQC meeting and copies of the letters sent by the Department to the applicants.

William H. Young
William H. Young *jed*

CASplettstaszer
229-6484
12/30/81
Attachments

FINAL CALENDAR YEAR 1981 TOTALS

Air Quality	\$64,040,493
Water Quality	9,063,832
Solid Waste	24,974,556
Noise	<u>172,251</u>
	\$98,251,132

PROPOSED JANUARY 1982 TOTALS

Air Quality	\$ -0-
Water Quality	99,821
Solid Waste	-0-
Noise	<u>17,104</u>
	\$ 115,926

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Chembond Corporation
475 N. 28th St.
Springfield, OR 97477

The applicant owns and operates a synthetic resin (plywood and particleboard adhesives) manufacturing facility at Springfield.

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

2. Description of Claimed Facility

The facility described in this application is a separate pump-out pipeline and loading system for lignin urea resin consisting of 175 feet of steel pipe, valves, flanges, and two resin loading filters.

Request for Preliminary Certification for Tax Credit was made February 15, 1981, and approved May 6, 1981. Construction was initiated on the claimed facility January 1981, completed July 7, 1981, and the facility was placed into operation July 7, 1981.

Construction on the claimed facility started in January 1981, which was prior to the Department's receipt of the written request for preliminary certification for tax credit. However, due to the urgency of the project, the Department's regional staff accepted a verbal request for preliminary certification. This was done prior to actual start of construction.

Facility Cost: \$5,214.07

3. Evaluation of Application

Prior to installation of the claimed facility, dark lignin liquor was pumped to the urea storage area and to the truck loading area through the same line used for transferring white urea resins. To prevent contamination of the white urea resins, the entire pump-out and loading system was flushed with water after handling the lignin resin. This contaminated wash water was discharged to a nearby storm sewer. The installation of the new separated transfer line has eliminated the need for washdowns and has eliminated the discharge of wash water contaminated with the formaldehyde based resins. There is no return on investment from this facility.

4. Summation

- a. Facility was issued a preliminary certificate.
- 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 is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more.
- f. Construction was initiated prior to filing of a written request for preliminary certification, but after Department field staff accepted a verbal request for certification based on the need to immediately begin construction to eliminate the discharge of water contaminated with formaldehyde.

5. Director's Recommendation

The Director recommends that, based upon the findings in the Summation, the Commission:

- a. Find that special circumstances render timely filing of a written request for preliminary certification unreasonable because the Department had actual verbal notice prior to construction and the Department was not prejudiced thereby;
- b. Waive the requirement of prior filing; and
- c. Issue a Pollution Control Facility Certificate bearing the cost of \$5,214.07 with 80 percent or more allocated to pollution control, for the facility claimed in Tax Credit Application No. T-1465.

CKA:l
WL1298 (1)
(503) 229-5325
January 6, 1982

State of Oregon
Department of Environmental Quality
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Weyerhaeuser Company
Willamette Region - Paperboard Manufacturing
Tacoma, WA 98477

The applicant owns and operates a paperboard, lumber, plywood, and particleboard manufacturing facility at Springfield.

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

2. Description of Claimed Facility

The facility described in this application is spill control system consisting of:

- a. A small contoured paved area with covered drainage ditches
- b. A collection sump and pump
- c. Piping and control valves

Request for Preliminary Certification for Tax Credit was made April 1, 1980, and approved September 24, 1980. Construction was initiated on the claimed facility September 1980, completed October 1980, and the facility was placed into operation October 1980.

Facility Cost: \$54,333 (Accountant's Certification was provided).

3. Evaluation of Application

Spills in the area of the No. 2 paper machine occasionally contaminated the ground surface. To prevent the discharge to the storm drainage system, the contaminated drainage was routed to the mill's biological treatment system. This practice was undesirable because of the reduced efficiency of the treatment system from the hydraulic load. The claimed facility contains the spilled materials and directs them to the mill's spill basin where the fiber and water can be reused in the mill. The system has minimized the flow to the treatment system. The facility reclaims approximately \$1,500 per year of fiber which had been previously wasted. The return on investment is insignificant.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- 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 is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$54,333 with 80 percent or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1468.

CKA:g

(503) 229-5325

December 10, 1981

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Weyerhaeuser Company
Willamette Region - Paperboard Manufacturing
Tacoma, WA 98477

The applicant owns and operates a paperboard, lumber, particle board, and plywood manufacturing facility at Springfield.

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

2. Description of Claimed Facility

The facility described in this application is PCB containment building consisting of metal walls and roof, and a sealed concrete floor with a continuous 20 inch high curb.

Request for Preliminary Certification for Tax Credit was made October 31, 1978, and approved October 31, 1978. Construction was initiated on the claimed facility November 1978, completed June 1979, and the facility was placed into operation August 1979.

Facility Cost: \$18,216 (Accountant's Certification was provided).

3. Evaluation of Application

The federal Toxic Substances Control Act requires any PCB container stored for disposal to be stored in a roofed structure with an approved floor and curb. The claimed facility was designed in accordance with the requirements of the federal act. The structure provides for secure storage of the PCB materials and prevents any contact with the surrounding environment. Without the facility, spills could enter the groundwater and surface waters. There is no return on investment from the claimed facility.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- 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 is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$18,216 with 80 percent or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1469.

CKA:l
WL1300 (1)
(503) 229-5325
December 16, 1981

State of Oregon
Department of Environmental Quality
TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Weyerhaeuser Company
Willamette Region - Paperboard Manufacturing
Tacoma, WA 98477

The applicant owns and operates a paperboard, lumber, plywood, and particleboard manufacturing facility at Springfield.

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

2. Description of Claimed Facility

The facility described in this application is a 3,000 gallon tank and metering pump to feed nutrient chemicals to the biological treatment system.

Request for Preliminary Certification for Tax Credit was made June 29, 1977, and approved July 18, 1977. Construction was initiated on the claimed facility July 1977, completed September 1977, and the facility was placed into operation September 1977.

Facility Cost: \$6,978 (Accountant's Certification was provided).

3. Evaluation of Application

Prior to installation of the claimed facility, nutrients were dumped into the waste water treatment system from 55 gallon barrels. The claimed facility provides for a more efficient biological system by continuously feeding chemicals at a controlled rate. There is no return on investment from this facility.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- 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 is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$6,978 with 80 percent or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1470.

CKA:g

(503) 229-5325

December 10, 1981

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Weyerhaeuser Company
Willamette Region - Paperboard Manufacturing
Tacoma, WA 98477

The applicant owns and operates a paperboard, lumber, particle board, and plywood manufacturing facility at Springfield.

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

2. Description of Claimed Facility

The facility described in this application is a waste water pH neutralization system consisting of a 3000 gallon tank and foundation, piping, instrumentation, and electrical connections.

Request for Preliminary Certification for Tax Credit was made February 1976, and approved April 7, 1976. Construction was initiated on the claimed facility April 1976, completed January 1977, and the facility was placed into operation February 1977.

Facility Cost: \$11,851 (Accountant's Certification was provided).

3. Evaluation of Application

Prior to installation of the claimed facility, the efficiency of the biological waste water treatment system was often poor due to a high pH of the incoming wastes. The new system automatically adds acid to the influent to neutralize the wastes prior to biological treatment. Since the variations of pH in the aeration basin have been minimized, the BOD reduction of the system has been improved. There is no return on investment from this facility.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.
- 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 is necessary to satisfy the intents and purposes of ORS Chapter 468 and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80 percent or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$11,851 with 80 percent or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1472.

CKA:1

WL1291 (1)

(503) 229-5325

December 14, 1981

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Homette Corporation
Buddy Mobile Homes
2520 By-Pass Road
Elkhart, IN 46514

The applicant owns and operates a mobile home manufacturing plant at Mt. Angel.

Application was made for tax credit for a noise pollution control facility.

2. Description of Claimed Facility

The facility described in this application is a concrete block noise barrier which screens an outside dust collection system.

Request for Preliminary Certification for Tax Credit was made on July 10, 1981, and approved on July 13, 1981.

Construction was initiated on the claimed facility on approximately July 16, 1981, completed on August 24, 1981, and the facility was placed into operation on August 24, 1981.

Facility Cost: \$17,104.52

3. Evaluation of Application

Prior to construction of this facility, the exterior dust collection system at Buddy Mobile Homes in Mt. Angel exceeded the DEQ's daytime noise standards by 10 dBA. The noise barrier which was constructed around the dust collector reduced the noise levels by 13 dBA. The dust collection system is now in compliance with the DEQ's daytime noise standards. One hundred percent (100%) of the facility costs are allocable to noise pollution control.

4. Summation

- a. Facility was constructed in accordance with the requirements of ORS 468.175, regarding preliminary certification.

- b. Facility was constructed on or after January 1, 1977, as required by ORS 468.165(1)(b).
- c. Facility is designed for and is being operated to a substantial extent for the purpose of preventing, controlling, or reducing noise pollution.
- d. The facility is necessary to satisfy the intents and purposes of ORS Chapter 467, and the rules adopted under that chapter.
- e. The portion of the facility cost that is properly allocable to pollution control is 80% or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$17,104.52 with 80% or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1481.

John Hector:a
NA1671 (1)
(503) 229-5949
December 24, 1981

State of Oregon
Department of Environmental Quality

Revocation of Pollution Control Facility Certificates

1. Certificates Issued to:

Georgia-Pacific Corporation
900 S. W. Fifth Avenue
Portland, OR 97204

Certificates were issued for air pollution control facilities.

2. Discussion

On December 17, 1973, Certificate 453 was issued to Georgia-Pacific Corporation for a sawdust and sanderdust emission control system at their Bunker Hill hardboard plant in Coos Bay. On November 22, 1974, Certificate 521 was issued to Georgia-Pacific Corporation for two baghouses also at their Bunker Hill plant. By letter of November 23, 1981 the company informed us that the above facilities had been sold (letter attached).

3. Summation

Pursuant to ORS 317.072(10), Certificates 453 and 521 should be revoked because the facilities have been sold.

4. Director's Recommendation

Revoke Pollution Control Facility Certificates 453 and 521 because the facilities have been sold.

CASplettstaszer
229-6484
12/30/81
Attachments



Georgia-Pacific Corporation 900 S.W. Fifth Avenue
Portland, Oregon 97204
Telephone (503) 222-5561

November 23, 1981

Ms. Carol A. Splettstaszer
Department of Environmental Quality
Management Services Division
P. O. Box 1760
Portland, Oregon 97207

Dear Ms. Splettstaszer:

Please be advised that Georgia-Pacific Corporation has sold the following certified pollution control facilities:

1. Emission of Sawdust and Sanderdust to Atmosphere
Control - Coos Bay, Oregon
Certificate 453-1973
Date Sold 3/26/81
Plywood Equipment Sales
P. O. Box 742
Beaverton, Oregon 97005
2. Bunker Hill Hardboard Plant Baghouses - Coos Bay, Oregon
Certificate 521-1974
Date Sold 3/27/81
Champion International Corp.
Drawer #7
Bonner, Montana 59823

Sincerely,

Florence G. Calhoun
Supervisor - Corporate
Accounting

FGC:1c

cc: Mr. R. C. DuBay
Mr. H. R. Egbert
Plywood Equipment Sales
Champion International Corp.

Management Services Div.
Dept. of Environmental Quality

RECEIVED
NOV 27 1981

POLLUTION CONTROL FACILITY CERTIFICATE

Issued To:	Ass. Owner	Location of Pollution Control Facility:
Georgia-Pacific Corporation Coos Bay Division 900 S. W. Fifth Avenue Portland, Oregon 97204		Hardboard Plant, Bunkerhill Coos Bay Coos County
Description of Pollution Control Facility: Emission of sawdust and sanderdust to atmosphere control consisting of: two Carter-Day baghouse filter units, one Carter-Day baghouse filter unit, collection and handling ducts, and nexessary foundations, fans, motors, and electrical controls.		
Date Pollution Control Facility was completed and placed in operation: <u>June/August, 1972</u>		
Actual Cost of Pollution Control Facility: \$ <u>106,643.19</u>		
Percent of actual cost properly allocable to pollution control: <u>Eighty percent (80%) or more</u>		

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

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

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

Signed Title B. A. McPhillips, Chairman

Approved by the Environmental Quality Commission

on the 17th day of December 19 73

POLLUTION CONTROL FACILITY CERTIFICATE

Issued To: Asst Owner Georgia-Pacific Corporation 900 S. W. Fifth Avenue Portland, Oregon 97204	Location of Pollution Control Facility: Hardboard Plant Bunker Hill Coos Bay, Oregon Coos County
Description of Pollution Control Facility: Two baghouses consisting of: two Clarke bag filters, high pressure blowers, and controls and other miscellaneous equipment.	
Date Pollution Control Facility was completed and placed in operation: 12-01-73; 12-01-73	
Actual Cost of Pollution Control Facility: \$ 50,081.00	
Percent of actual cost properly allocable to pollution control: Eighty percent (80%) or more	

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

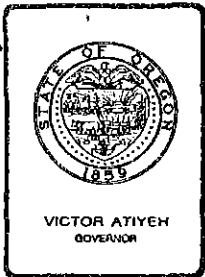
Therefore, this Pollution Control Facility Certificate is issued this date subject to compliance with the statutes of the State of Oregon, the regulations of the Department of Environmental Quality and the following special conditions:

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

Signed Title B.A. McPhillips, Chairman

Approved by the Environmental Quality Commission

on the 22nd day of November 19 74



T-1356

Department of Environmental Quality

522 S.W. 5th AVENUE, BOX 1760, PORTLAND, OREGON 97207

December 14, 1981

Stephen J. Reid
President
Pioneer International, Inc.
2405 N. E. 45 Avenue
Portland, Oregon 97213

Re: Tax Credit Application T-1356

Dear Mr. Reid:

The Environmental Quality Commission, at their December 4, 1981 meeting, considered your request for certification of pollution control facilities for tax credit and waiver of preliminary certification requirement.

Oregon Revised Statute 468.175(1) states:

"For facilities constructed on or after October 3, 1979, the commission may waive the filing of the [preliminary certification] application if it finds the filing inappropriate because special circumstances render the filing unreasonable."

The Commission has directed us to inform you that based upon the information presented in your application they would not be inclined to approve your request for waiver. This is to advise you of the Commission's intent to deny your request at their January 22, 1981 meeting unless you provide further details about your special circumstances that would warrant a waiver, not later than January 11, 1982.

In another request for waiver before the Commission, they granted the request because the applicant proved the Department had in depth knowledge of their project before it was constructed, eventhough they failed to file the Request for Preliminary Certification for Tax Credit form. Perhaps this may be of some help to you. Proof would be such things as letters or a record of conversations with Department personnel before construction or installation of the facility began. Mr. F. A. Skirvin in our Air Quality Division (229-5414) may be able to assist you in this regard.

Sincerely,

Michael J. Downs, Administrator
Management Services Division

MJD:cs

cc: F. A. Skirvin.

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Pioneer International, Inc.
2405 NE 45th
Portland, OR 97213

The applicant owns and operates a heating oil and diesel fuel and gasoline distributor business at 810 N. Fremont, Portland, 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 the conversion of a gasoline delivery trailer from top loading to bottom loading in order to comply with the VOC regulations.

Request for Preliminary Certification was not made; applicant requests that Commission waive requirements for filing.

Construction was initiated on the claimed facility on 1-21-81, completed on 2-25-81, and the facility was placed into operation on 2-25-81.

Facility Cost: \$4,898.39. Based on a review of the billing statement provided in the application, the Department concludes that the cost figure represents actual expenses incurred by the applicant for this facility.

3. Evaluation of Application

In order to receive gasoline at a gasoline distributor terminal, the applicant had to have a delivery tank that was certified by the Department. He installed the necessary control lines himself. The tank repair shop converted the tank to bottom loading, tested it for pressure/vacuum tightness and had it certified by the Department. There is no economic benefit to the applicant; therefore, 80% or more of the cost is allocated to pollution control.

The applicant requests that the Commission waive the requirement to submit a request for preliminary certification for tax credit before the start of construction. The applicant learned about the

Department's VOC requirements through notification by his gasoline terminal that delivery would be stopped after a certain date unless the delivery tank was certified by the DEQ. The gasoline tank repair shop knew about the tax credit program, but, it did not inform the applicant.

Since the applicant learned about the requirement from his gasoline supplier, ordered the necessary work done three months before the scheduled cut-off date and did not know about filing before the start of construction, the Department recommends that the Commission waive the requirement for filing.

4. Summation

- a. Special circumstances exist which made the filing of an application for preliminary certification unreasonable, and the facility would otherwise be eligible for tax credit.
- 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 portion of the facility cost that is properly allocable to pollution control is 80% or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$4,898.39 with 80% or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1356.

F.A. Skirvin:a
AA1455 (1)
(503) 229-6414
10/14/81

pioneer oil
pioneer oil
pioneer oil

T-1356
Management Services Div.
Dept. of Environmental Quality

RECEIVED

APR 1 1981

26V420

281-2828 ————— 2405 ne 45th avenue ————— portland, oregon 97213

March 30, 1981

Department of Environmental Quality
Management Services Division
P. O. Box 1760
Portland, OR. 97207

Dear Sir:

We are writing you at this time regarding the filing of your form,
"Notice of Intent to Construct and Request for Preliminary Certification
for Tax Credit."

We would like to ask the commission to waive the filing of this form
for the reasons stated below.

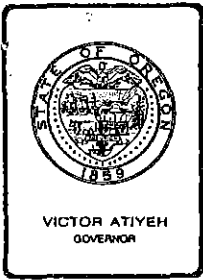
The company which worked on our tanker to install a bottom loader for
vapor recovery was aware that we were going to do this work for us
for quite a while. It was not until after the work was completed
were we aware that forms needed to be filed. The company did send
these forms when the work was done.

It is because of these special circumstances that we find the filing
of this form unreasonable.

We appreciate your prompt consideration to this matter.

Sincerely,

Stephen J. Reid
Stephen J. Reid
President



Department of Environmental Quality

522 S.W. 5th AVENUE, BOX 1760, PORTLAND, OREGON 97207

T-1390

December 14, 1981

Ted Larsen
Facility Superintendent
Kaiser Cement Corporation
931 North River Street
Portland, Oregon 97212

Re: Tax Credit Application T-1390

Dear Mr. Larsen:

The Environmental Quality Commission, at their December 4, 1981 meeting, considered your request for certification of pollution control facilities for tax credit and waiver of preliminary certification requirement.

Oregon Revised Statute 468.175(1) states:

"For facilities constructed on or after October 3, 1979, the commission may waive the filing of the [preliminary certification] application if it finds the filing inappropriate because special circumstances render the filing unreasonable."

The Commission has directed us to inform you that based upon the information presented in your application they would not be inclined to approve your request for waiver. This is to advise you of the Commission's intent to deny your request at their January 22, 1981 meeting unless you provide further details about your special circumstances that would warrant a waiver not later than January 11, 1982.

In another request for waiver before the Commission they granted the request because the applicant proved the Department had in depth knowledge of their project before it was constructed, eventhough they failed to file the Request for Preliminary Certification form. Perhaps this may be of some help to you. Mr. F. A. Skirvin in our Air Quality Division (229-6414) may be able to assist you in this regard. Proof would be such things as letters or a record of conversations with Department personnel before construction of the facility began.

Sincerely,

Michael J. Downs, Administrator
Management Services Division

MJD:cs

cc: F. A. Skirvin, DEQ

State of Oregon
Department of Environmental Quality

TAX RELIEF APPLICATION REVIEW REPORT

1. Applicant

Kaiser Cement Corporation
931 N. River Street
Portland, OR 97212

The applicant owns and operates a bulk cement distribution facility at Portland, 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 six baghouse filters.

Request for Preliminary Certification was not made; applicant requests that Commission waive requirements for filing.

Construction was initiated on the claimed facility on 9-80, completed on 1-81, and the facility was placed into operation on 1-81.

Facility Cost: \$91,956.00 (Accountant's Certification was provided).

3. Evaluation of Application

The vents on six cement storage silos are controlled by the claimed facility. These vents exhaust air as the silos are filled with cement. The new baghouses replace old obsolete filters.

The silos are filled by pumping a mixture of cement and air into them. The silos act like expansion chambers where the cement drops out of the air. The cement dust remaining in the air is filtered out when the air is vented through the baghouse.

The baghouses are DCE Dalamatic Model DLM-V20F on cement silo numbers 2, 4, 6, 7, 9 and 11.

A sock or simple cotton bag filter is used on the vent when there is no need to prevent visible emissions. The difference in the amount of cement saved by the baghouse over a more porous sock is insignificant. The percent of the cost allocable to pollution control is 80% or more.

The applicant requests in the attached letter that the Commission waive the requirements for filing for Preliminary Certification before the start of construction. The supervisor of Property and Construction Accounting, who did the previous filing for Pollution Control Facilities tax credits, died unexpectedly in June, 1980. Construction on the project was started in September, 1980. The workload of his department fell upon one man for three months and the heavy workload would not allow him to fulfill this task. This is considered a special circumstance that made filing of an application for preliminary certification unreasonable. The project is otherwise considered eligible for tax credit. The Department recommends that filing for Preliminary Certification be waived because the man in charge died at the critical time to file which is after the decision to go ahead with the project and before the start of construction.

4. Summation

- a. Special circumstances exist which made the filing of an application for preliminary certification unreasonable, and the facility would otherwise be eligible for tax credit.
- 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 portion of the facility cost that is properly allocable to pollution control is 80% or more.

5. Director's Recommendation

Based upon the findings in the Summation, it is recommended that a Pollution Control Facility Certificate bearing the cost of \$91,956.00 with 80% or more allocated to pollution control, be issued for the facility claimed in Tax Credit Application No. T-1390.

F.A. Skirvin:a
AA1541 (1)
(503) 229-6414
November 6, 1981

**KAISER
CEMENT**

KAISER CEMENT CORPORATION, KAISER BUILDING, 300 LAKESIDE DRIVE, OAKLAND, CALIFORNIA 94612

July 21, 1981

Department of Environmental Quality
Management Services Division
Box 1760
Portland, Oregon 97207

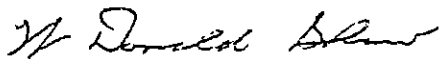
Subject: Notice of Intent to Construct and Request for Preliminary
Certification for Tax Credit

We are asking the Commission to waive the filing of the application for preliminary certification under ORS 468.175 due to an untimely death in our Property Dept. Our Mr. Paul R. Deleuran, Supervisor, Property and Construction Accounting, who did the previous filing for Pollution Control Facilities tax credits, died unexpectedly in June, 1980. The workload of his department fell upon one man for three months and the heavy workload would not allow him to fulfill this task.

In September, 1980 our project for six dust collectors at our Portland Distribution Facility had begun. Our tax department representative, Mr. Raymond A. Schmidt, contacted Mr. Mike Downs of the Department of Environmental Quality and he stated that we should file after completion of the project and ask the commission for a waiver. We respectfully request your earnest consideration of our application for waiver.

Should you require further information, please do not hesitate to contact me.

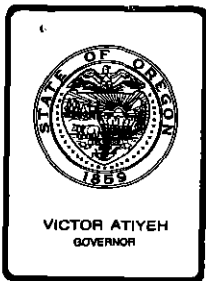
KAISER CEMENT CORPORATION



W. Donald Shaw
Senior Property Acct, Property & Construction Accounting

WDS/gj

T-1390



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. D , January 22, 1982, EQC Meeting

Request for Authorization to Conduct Public Hearings On Proposed Amendments to Rules Governing On-Site Sewage Disposal, OAR 340-71-100 to 340-71-600, OAR 340-73-025 to 340-73-085.

Background and Problem Statement

ORS 454.625 provides that the Commission, after hearing, may adopt rules for on-site sewage disposal.

At its March 13, 1981 meeting the Commission adopted rules for On-Site Sewage Disposal to replace rules governing Subsurface and Alternative Sewage Disposal. Since then the On-Site Sewage Disposal rules have been amended several times through the adoption of both permanent and temporary rules. Two (2) of the temporary rules need to be processed through the permanent rule making procedures. They are concerned with amendments to the sewage disposal service bonding provisions, and elimination of conflicts between the state electrical code and the materials standard for pumps and switches.

On October 9, 1981 the Commission reviewed a petition from Mr. Douglas Marshall, Senior Sanitarian with Tillamook County, requesting the definition of "bedroom" be amended. The Commission instructed staff to include Mr. Marshall's proposed definition in this rule amendment package in order to elicit testimony.

Program staff have received requests for rule amendments from the following:

1. Mr. M. W. Whitfield, Permit Manager, Multnomah County Environmental Services Section, requesting amendments to the Multnomah County Fee Schedule.

2. Ms. Gail Forsyth, Roto-Foam Division, Norwesco, Inc. requesting an examination of the standards for septic tank construction as they relate to the access cover dimension above the inlet and outlet fillings.
3. Mr. Timothy J. Lang, Product Manager, Advanced Drainage Systems, Inc., requesting adoption of proposed gravel-less disposal system rules.

In addition, staff have found some of the rules to be illogically located within the overall rule structure, poorly worded and difficult to interpret and administer, overly restrictive, or in conflict with other rules. Several technical rule amendments have been proposed to correct these problems.

On June 5, 1981, the Commission adopted rules providing for surcharges on new site evaluations and new construction installation permits. The fees generated by these surcharges are used to fund positions within the Department to provide technical assistance to contract counties and to the public. A considerable amount of time is spent by Department staff in providing technical assistance in the activity categories of alteration permits, repair permits, and authorization notices for which no surcharge has yet been established. It is appropriate to levy a surcharge on each of these activities to help defray the costs of providing technical assistance.

Alternatives and Evaluation

The alternatives appear to be as follows:

1. Authorize public hearings on the proposed amendments.
2. Do not authorize public hearings.

It is staff's opinion that the only logical alternative is to authorize public hearings. The two temporary rule amendments became necessary because existing rule language either hindered implementation of statutory amendments, or was found to be in conflict with the administrative rules of another state agency. Failure to authorize public hearings will result in the previous rule language returning upon expiration of the temporary rules. The proposed technical rule amendments can allow smoother rule administration only if they are taken through the rule amendment procedures. The funding for a portion of program administration is dependent upon surcharge revenues. Without authorization to hold public hearings on broadening the scope of the surcharge, program administration could have to be reduced. In addition, several requests for rule amendments, including a petition before the Commission, have been received. The necessity of these amendments should be determined through hearings authorized by the Commission.

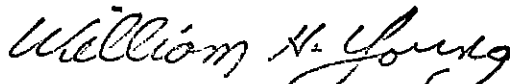
A presentation and discussion of the proposed amendments is contained in Attachments "C", "D", and "E".

Summation

1. ORS 454.625 provides that the Commission, after hearing, may adopt rules for on-site sewage disposal.
2. The Commission has adopted two temporary rules that must be processed through the permanent rule making procedures or they will expire.
3. A petition to amend the definition of "bedroom" was received by the Commission. Staff was instructed to include the proposed definition in this rule amendment package in order to elicit testimony.
4. Staff received a request to amend portions of the minimum septic tank standards.
5. Staff received a request to amend the rules to allow installation of gravel-less disposal trench systems.
6. A number of technical rule amendments are necessary to provide for smoother rule administration.
7. To help defray the costs of providing technical assistance, in the categories of alteration permits, repair permits, and authorization notices, it is appropriate to impose a surcharge on these activities.

Director's Recommendation

Based upon the summation, it is recommended that the Commission authorize public hearings, to take testimony on the question of amending OAR 340-71-100 to 340-71-600, and OAR 340-73-025 to 340-73-085, as presented in Attachment "C", "D", and "E".


William H. Young *jas*

Attachments:

- "A" Hearing Notice
- "B" Statement of Need and Fiscal Impact
- "C" Presentation of Issue, Problem, Discussion and Proposal of Substantive Amendments
- "D" Explanation of Proposed Housekeeping Amendments
- "E" Proposed Rule Amendments
- "F" Supporting Documents

Sherman O. Olson, Jr.
229-6443
December 18, 1981

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of the Amendment) Notice of Proposed Adoption of
to Rule OAR 340-71-100 to 71-600) Amendment to OAR 340-71-100 to
and OAR 340-73-025 to 73-085,) 71-600 and OAR 340-73-025 to
On-Site Sewage Disposal Rules) 73-085, On-Site Sewage Disposal
Rules

- Public hearings will be held on February 2, 1982, at 10 am, at the locations shown below to consider the adoption of amendments to OAR 340-71-100 to 71-600 and OAR 340-73-025 to 73-085, On-Site Sewage Disposal Rules:

Portland

Department of Environmental Quality
Conference Room 1400
522 S.W. Fifth Avenue

Bend

State Office Building
Conference Room
2150 N.E. Studio Road

Medford

Second Floor Conference Room
201 West Main Street

Newport

Room 6
Naterlin Center
Highway 101, Newport

- The proposed rule amendments address changes to the Sewage Disposal Services bond requirements; standards for pumps, controls and alarms; the definition of "bedroom"; an affidavit requirement when a sewage system and the facility it serves are on separate lots; permit renewals; abandonment of systems; construction type chemical toilet uses; and sand filter membrane liners. A surcharge would be imposed on additional program activities, the fee schedule for Multnomah County would be amended, and several housekeeping rule amendments will be considered as well.
- The issues are whether the proposed amendments are appropriate.
- Interested persons may present testimony orally or in writing at the hearing, or in writing to the Department of Environmental Quality, Attention: Sherman Olson, P. O. Box 1760, Portland, Oregon 97207, not later than February 2, 1982.
- The proposed rule amendments have been identified as not affecting land use.
- Citation of Statutory Authority, Statement of Need, Principal Documents Relied Upon, and Statement of Fiscal Impact are filed with the Secretary of State.

Attachment "A"
Page 2

7. A Department of Environmental Quality staff member or an Environmental Quality Commission hearing officer will be named to preside over and conduct the hearings.

William H. Young, Director
Department of Environmental Quality

January 15, 1982

XG784 (1)

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of Amendment	)	Statutory Authority,
to Rules OAR 340-71-100 to 71-600	)	Statement of Need,
and OAR 340-73-025 to 73-085,	)	Principal Documents Relied Upon
On-Site Sewage Disposal Rules	)	and Statement of Fiscal Impact

1. Citation of Statutory Authority:

ORS 454.625, which requires the Environmental Quality Commission to adopt rules pertaining to On-Site Sewage Disposal.

2. Statement of Need:

The Environmental Quality Commission has adopted temporary rules pertaining to sewage disposal service businesses, and pumps & switches, that will expire if not adopted as permanent rules. The temporary rules provided immediate remedy to bring portions of the On-Site Sewage Disposal rules into compliance with the State Electrical Code, and to implement the provision of Chapter 148, Oregon Laws 1981. Some of the rules have been found to be illogically located within the overall rule structure, poorly worded and difficult to interpret and administer, overly restrictive, or in conflict with other rules. The proposed amendments are intended to correct these problems. Multnomah County has requested an adjustment in some application fees because their costs in providing service have been higher than the fee received. The Department of Environmental Quality spends considerable time in providing technical assistance to contract counties and the public within the activity categories of alteration permits, repair permits, and authorization notices, and finds it necessary to levy a surcharge on these activities to help defray the costs of providing this assistance.

3. Documents Relied Upon in Proposal of the Rule Amendments:

1. Agenda Item F, a Staff Report for the Environmental Quality Commission meeting on December 4, 1981.
2. Agenda Item U, a Staff Report for the Environmental Quality Commission meeting on August 28, 1981.
3. Agenda Item N, a Staff Report for the Environmental Quality Commission meeting on October 9, 1981.
4. Letter of December 16, 1981 to Sherman Olson (Department of Environmental Quality) from Timothy J. Lang (Advanced Drainage Systems, Inc.).

5. Letter of November 9, 1981 to Sherman Olson (Department of Environmental Quality) from Robert L. Haskins (Assistant Attorney General).
6. Interoffice Memo of September 24, 1981 to Sherman Olson (Department of Environmental Quality) from Dick Nichols (Department of Environmental Quality).
7. Letter of August 27, 1981 to Sherman Olson (Department of Environmental Quality) from Gail Forsyth (Norwesco, Inc.).
8. Memorandum of June 15, 1981 to Environmental Quality Commission from Roy Burns (Lane County).
9. Letter of October 9, 1981 to Jack Osborne (Department of Environmental Quality) from M. W. Whitfield (Multnomah County).

The above documents are available for public inspection at the Office of the Department of Environmental Quality, 522 S.W. Fifth Avenue, Portland, Oregon, during regular business hours, 8 am to 5 pm, Monday through Friday.

4. Fiscal and Economic Impacts:

Imposition of a five dollar (\$5) surcharge on three (3) additional activities will raise the costs to applicants and provide additional revenue to fund portions of the On-Site Sewage Disposal Program administration. Amendments to the Multnomah County fee schedule will raise the cost of some permits and result in additional revenue for the Multnomah County program. Other rule amendments should have little or no economic impacts. There should be no significant economic impact upon small businesses, although sewage disposal service businesses will be allowed the flexibility to post alternative forms of security in lieu of a bond.

William H. Young, Director
Department of Environmental Quality

January 15, 1982
XG724 (1)

DEPARTMENT OF ENVIRONMENTAL QUALITY

Presentation of Issue, Problem, Discussion and Proposal of Substantive Amendments for the following:

1. The definition of "bedroom".
2. Affidavit required when system and facility it serves are on separate lots with the same ownership.
3. Renewal of construction-installation permits.
4. Surcharges.
5. Abandonment of Systems.
6. Construction type chemical toilets.
7. Gravel-less disposal trench system rules.
8. Require a site evaluation report with each variance application.
9. Waiver of variance application fee.
10. Disbursement of portion of variance application fee.
11. Forms of security for sewage disposal services.
12. Multnomah County Fee Schedule.
13. Standards for Effluent Pumps, Controls & Alarms, and Dosing Siphons.
14. Sand Filter Membrane Liners.

January 1982

ISSUE A petition, presented to the Commission, to amend the "bedroom" definition.

PROBLEM Other rooms, in addition to bedrooms, have the potential to be used as bedrooms. In the current "bedroom" definition, either the Department of Commerce building codes representative or the authorized building official determines if a room is a bedroom. The petition would allow the determination to be made by Department or Agreement County staff. The number of bedrooms a new dwelling has, beyond four bedrooms, are used as a design parameter in projecting daily sewage flows to properly size an on-site system.

DISCUSSION The reason the bedroom definition is important is that on-site systems are sized on the number of bedrooms in a dwelling. Generally, the number of bedrooms tends to limit the number of individuals who may reside in a dwelling.

The current definition of a bedroom is as follows:

(9) "Bedroom" means any room within a dwelling which is accepted as such by the State of Oregon Department of Commerce Building Codes Representative or the local authorized building official having jurisdiction.

The petition proposes to return to the definition that existed prior to the present definition, and reads as follows:

A "bedroom" means any portion of a dwelling which is so designed as to furnish the minimum isolation necessary for use as a sleeping area and includes but is not limited to a den, study, sewing room, sleeping loft or enclosed porch.

The previous (proposed) definition was replaced for three reasons. It was too broad and all inclusive, and difficult to interpret accurately. It provided no criteria to serve as a guide for determining whether a given room is indeed a bedroom, and as such was open to abuse by regulators who wished to identify excessive numbers of bedrooms in a dwelling.

The second reason the old definition was dropped in favor of the new was to place the determination of bedrooms in the hands of one agency rather than two, so that citizens are not faced with conflicting determinations by different governmental entities.

The third reason the old definition was dropped was because a minimum sized system to serve a dwelling was adopted into the rules. The rules now provide that the minimum system for a dwelling be sized for 4 bedrooms. With this minimum size system rule the definition of bedroom becomes less critical.

PROPOSAL

The current bedroom definition not be amended.

ISSUE The sewage disposal system and the facility it serves located on separate lots or parcels.

PROBLEM Present rules, [OAR 340-71-130(11)], require a recorded utility easement when a sewage disposal system and the facility it serves are located on separate lots or parcels, under different ownership. This easement assures the system owner access to maintain or repair the system.

The rule does not address the situation where the system is on one lot or parcel and the facility it serves is on another lot or parcel, both under the same ownership. In this situation one or another of the lots or parcels may be sold and the facility owner may not be able to enter the other lot or parcel to maintain or repair the system.

DISCUSSION In the event a system owner is unable to maintain or repair a failing system, health hazards or water pollution may occur. It is essential that the system owner have access to the system at all times. The proposed amendment to OAR 340-71-130(11) adds a new subsection (b) requiring the filing of an affidavit which would provide legal access (easement), to maintain or repair the system.

PROPOSAL Amend OAR 340-71-130(11) by adding a new subsection (b), as follows:

(b) Whenever an on-site system is located on one lot or parcel and the facility it serves is on a contiguous or adjacent lot or parcel under the same ownership, the owner shall execute and record in the county land title records an affidavit which notifies prospective property purchasers of this fact in a form approved by the Department.

(Underlined _____ material is new)

ISSUE Renewal of construction-installation permits.

PROBLEM Construction permits are valid for one year from date of issuance. Present rules provide for renewal of construction permits upon payment of the appropriate fee. The rules do not provide time limits within which a permit may be renewed.

DISCUSSION Under present rules a person may renew a permit at any time by paying the appropriate fee. Often a permit is renewed several years after its expiration. It is felt that the public can best be protected by requiring that permits may be renewed only prior to their expiration. Once a permit expires, a new application and property evaluation should occur.

PROPOSAL Amend OAR 340-71-140(1)(b)(E) by adding a "note" to read as follows:

NOTE: Renewal of a permit may be granted to the original permittee if work on the on-site system has commenced and an application for permit renewal is filed prior to the original permit expiration date.

(Underlined _____ material is new)

ISSUE Surcharges on fees for certain activities.

PROBLEM Present rules provide for surcharges on site evaluations and permits. The fees generated by these surcharges are used to fund positions within the Department to provide technical assistance to contract counties and to the public. There are other activities which utilize technical assistance time for which no surcharge is levied.

DISCUSSION A considerable amount of time is spent by Department personnel in providing technical assistance in the following activity categories.

- alteration permits
- repair permits
- authorization notices

It is felt it would be appropriate to levy a surcharge on each of these activities, to help defray costs of providing technical assistance.

PROPOSAL Amend OAR 340-71-140(4), by adding new subsections (c), (d), and (e) to read as follows:

(Bracketed [] material is deleted, underlined ___ material is new.)

- (4) Surcharge. In order to offset a portion of the administrative costs of the statewide on-site sewage disposal program, a surcharge for each activity, as set forth in the following schedule, shall be levied by the Department and by each Agreement County. Proceeds from surcharges collected by the Department and Agreement Counties shall be accounted for separately. Each Agreement County shall forward the proceeds to the Department as negotiated in the memorandum of agreement (contract) between the County and the Department.

Activity	Surcharge
(a) Site evaluation: per lot <u>or site</u> ; or for each 1,000 gallons projected daily sewage flow or part thereof <u>, whichever is greater</u> up to 5,000 gallons	\$ 15
(b) New construction Installation Permit....	\$ 5
(c) <u>Alteration permit</u>	\$ 5
(d) <u>Repair permit</u>	\$ 5
(e) <u>Authorization Notice</u>	\$ 5

- ISSUE Conditions under which an on-site system must be abandoned. (Abandonment of Systems)
- PROBLEM Present rules specify conditions under which an on-site sewage disposal system must be abandoned. Legal counsel advises that some of these conditions are improperly worded and will not achieve the desired result.
- DISCUSSION In the rewrite of the rules, adopted March 13, 1981, language on "abandonment of systems" was amended from previous language which in legal counsel's opinion achieved the desired results while protecting the systems owner. The present wording is faulty and needs to be corrected.
- PROPOSAL Amend OAR 340-71-185 as follows:
- (Bracketed [] material is deleted, underlined ___ material is new.)
- 340-71-185 ABANDONMENT OF SYSTEMS.
- (1) The owner shall abandon a system when:
- (a) A sewerage system becomes available and the building sewer has been connected thereto; or
 - (b) The source of sewage has been permanently eliminated; or
 - (c) The system [is failing and cannot be repaired; or] has been operated in violation of OAR 340-71-130-(13), unless and until a repair permit and Certificate of Satisfactory completion are subsequently issued therefor; or
 - (d) The system has been constructed [without a permit and cannot be brought into compliance with these rules; or] installed, altered, or repaired without a required permit authorizing same, unless and until a permit is subsequently issued therefor; or
 - (e) The system has been operated or used without a required Certificate of Satisfactory Completion[,] or Authorization Notice authorizing same , [and cannot be brought into conformance with these rules.] unless and until a Certificate of Satisfactory Completion or Authorization Notice is subsequently issued therefor.

ISSUE Locations where construction type chemical toilets may be used.

PROBLEM The rule for nonwater-carried disposal systems (including chemical toilets) lists a number of locations where these facilities may be used. The listing is too broad and allows use of construction type chemical toilets at inappropriate locations such as at seasonal dwellings.

DISCUSSION In locations such as dwellings, these facilities are not maintained properly and may cause health hazards as well as result in improper disposal of contents. The proposed amendment would narrow the use of construction type chemical toilets to those uses for which they were designed.

PROPOSAL Amend OAR 340-71-330(2)(b) to provide an exception as follows:

 (Bracketed [] material is deleted, underlined ___ material is new.)

 (b) Nonwater-carried waste disposal facilities may be approved for temporary or limited use areas, such as recreation parks, camp sites, seasonal dwellings, farm labor camps or construction sites, provided all liquid wastes can be handled in a manner to prevent a public health hazard and separation distances in Table 8 can be met.

Exception: The use of self-contained construction type chemical toilets is limited to construction sites, farm labor camps, county fairs and rodeos, or similar uses.

- ISSUE Request to adopt rules pertaining to an alternative on-site sewage disposal system called a Gravel-Less Disposal Trench System.
- PROBLEM The specifications for trench construction require the trenches to be two feet wide, with filter material (gravel or crushed rock) placed six inches below and two inches above the distribution pipe, and extend the full length and width of the trench.
- DISCUSSION The proposed gravel-less disposal trench system would use large diameter corrugated polyethylene pipe (minimum inside diameter of ten inches) wrapped in a factory-installed spun-bonded nylon filter fabric. The wrapped pipe would be placed in trenches at least eighteen inches wide and eighteen to thirty six inches deep. Filter material would not be used in this system. A gravel-less disposal trench system would function in the same manner as a standard system.
- PROPOSAL Amend OAR 340 Division 71 as follows:
- (1) Add a new rule, OAR 340-71-355, that provides the criteria for use of a gravel-less disposal trench system.
 - (2) Amend OAR 340-71-415 by allowing a variance officer the ability to consider granting variances from 340-71-355.
 - (3) Amend OAR 340-71-Diagram 12 by adding a cross-section illustration of a gravel-less trench.
 - (4) Amend OAR 340-73-060(2) by adding a new subsection that lists the materials criteria for pipe used within a gravel-less disposal trench system.

(The above amendments are found in Attachment E)

ISSUE Require a site evaluation report be provided with each variance application.

PROBLEM The current rule requires each application be accompanied by a site evaluation denial, if the property has been denied, unless waived by the variance officer. With the numbers and kinds of on-site systems available today sites are not usually denied.

DISCUSSION The language in the existing rule was adopted when there were very few alternative systems available, and consequently a higher percentage of sites evaluated were denied. But now most sites are found suitable for placement of either a standard system or one or more of the several alternative systems. Many variance applications today are for sites that meet the requirements for an alternative system, and therefore are not denied. The intent of the rule has been that the potential sites be evaluated for suitability by Department or Agreement County staff, and based upon their evaluation report, the applicant would decide if proceeding through the formal variance process was warranted. That evaluation report is used by the variance officer when a variance applicant goes to hearing.

OK, added a line

The Department has recently been troubled by some applicants who choose to use the variance process without having a site evaluation conducted before hand. This places an additional burden upon the variance officer to conduct a complete evaluation of the site, it disadvantages the applicant because the variance proposal must address the limiting factors at the site, and the local staff that would have prepared the evaluation report is usually unprepared to adequately comment on a site they have not reviewed.

PROPOSAL Amend OAR 340-71-415(3) as follows:
(Bracketed [] material is deleted, Underlined _____ material is new.)

(4) [(3)] Applications.

 (a) Applications shall be made to the Department or Agreement County as appropriate. A separate application must be filed for each site considered for a variance.

 (b) Each application shall be accompanied by:

 (A) A site evaluation report [denial, if the parcel has been denied, (unless

waived by the variance officer)]; and

- (B) Plans and specifications for the proposed system; and
- (C) The appropriate fee; and
- (D) Other information necessary for rendering a proper decision; and
- (E) The application shall be signed by the property owner.

- ISSUE Waiver of variance application fee.
- PROBLEM ORS 454.662 allows a variance applicant that meets each of three conditions to file a variance application without paying a fee. The conditions are:
1. The applicant must be 65 years of age or older.
 2. The applicant must be a resident of this state.
 3. The applicant has an annual household income, as defined in ORS 310.630, of \$15,000 or less.
- Applicants that meet these conditions could go beyond legislative intent by developing more than one site through the variance provisions without paying for the additional administrative costs incurred by the Department.
- DISCUSSION The intent of the waiver of variance application fee was to allow an individual meeting the qualifications to develop a homesite on property that was not suited for a standard system and live on the property. This is abused by individuals that are applying for more than one site.
- PROPOSAL Amend OAR 340-71-415(4) as follows:
- (Bracked [] material is deleted, Underlined ____ material is new.)
- (4) An applicant for a variance under this rule is not required to pay the application fee, if at the time of filing, the applicant:
- (a) Is sixty-five (65) years of age or older; and
 - (b) Is a resident of the State of Oregon; and
 - (c) Has an annual household income, as defined in ORS 310.030, of \$15,000 or less[.] ; and
 - (d) Has not previously applied under the provisions of this section.

ISSUE Disbursement of a portion of the variance application fee to the Agreement County to defray costs of permit, certificate issuance, and inspections.

PROBLEM The variance application fee is appropriated to meet administrative expenses of the hearings.

DISCUSSION ORS 454.662 provides that each application for a variance submitted pursuant to ORS 454.657 must be accompanied by a fee, with one exception. It further provides that the monies received are continuously appropriated to meet administrative expenses of the hearings. The costs for the construction-installation permit, certificate issuance and inspections are not administrative expenses of the hearing. The rule goes further than the statute allows.

PROPOSAL Amend OAR 340-71-435 as follows:

(Bracketed [] material is deleted.)

- (1) After a variance is granted the appropriate Agent shall be notified in writing.
- (2) In nonagreement counties the Department shall issue system construction installation permits, perform necessary inspections and issue Certificates of Satisfactory Completion.
- (3) In agreement counties, the county shall issue system construction installation permits, perform necessary inspections and issue Certificates of Satisfactory Completion.
- [(4) The Department shall disburse forty (40) dollars of the variance fee per granted variance to the agreement county, in which the property is located, to defray costs of permit and certificate issuance and inspections.]

ISSUE Other forms of security in lieu of a surety bond for sewage disposal service.

PROBLEM Applicants for sewage disposal service licenses have been required by statute to obtain a surety bond executed in favor of the State of Oregon. Such applicants were not allowed to tender other security in lieu of the surety bond, as is allowed with other licenses or permits. This requirement prevented some applicants who could not obtain a bond from becoming licensed.

DISCUSSION Chapter 148, Oregon laws 1981, amended statutes (ORS 454.695) to provide for other security in lieu of surety bonds. The other types of acceptable security were to be determined by the Environmental Quality Commission and adopted by rule. In addition to the surety bond, the following types of security were found acceptable to the Commission.

- (a) Insured savings account assigned to the Department.
- (b) Negotiable securities approved by the State Treasurer.

PROPOSAL Amend OAR 340-71-600, as appropriate, to provide other security approved by the Commission.

(The proposed amendments may be found in Attachment "E").

ISSUE Multnomah County Fee Schedule

PROBLEM Multnomah County feels that the fee category of "repair" should not apply to cesspools. In addition two other systems have inadequate fees.

DISCUSSION Multnomah County states that cesspools are not "repaired", they are replaced. When a cesspool fails and work is necessary to correct the situation, it is not repaired but is replaced with a completely new cesspool at a different location. With this in mind, the County is of the opinion that a separate fee, "replacement of a cesspool" fee is appropriate.

In addition, the County proposes two other fees, "repair of septic tank/drainfield with lift pump" and "septic tank/drainfield lift pump system" construction permit. The County finds that more time and fields visits are required to inspect these systems than conventional ones thereby increasing their costs.

PROPOSAL Amend Multnomah County's Fee Schedule, OAR 340-71-140(2)(c) Appendix M as follows:

(Underlined ___ material is new.)

<u>Septic tank/drainfield lift pump system</u>	<u>\$85.00</u>
<u>Replacement of cesspool</u>	<u>\$65.00</u>
<u>Repair of septic/tank drainfield with lift pump</u>	<u>\$55.00</u>

ISSUE Standards for Effluent Pumps, Controls & Alarms, and Dosing Siphons.

PROBLEMS The Department was informed that some provisions of the rule establishing minimum standards for effluent pumps, controls, alarms, and dosing siphons were in conflict with the explosion-proof requirements of the State of Oregon electrical code. Further, some requirements would prevent the use of some equally reliable pumps and switches.

DISCUSSION On August 28, 1981 the Commission adopted a temporary rule amending the existing rule. the temporary rule eliminated the conflicts with the electrical code, and allowed the use of other types of pumps and switches that otherwise could not have been used. The temporary rule will expire and must therefore be replaced by a permanent rule.

PROPOSAL Amend OAR 340-73-055 as proposed in Attachment "E".

ISSUE Sand filter membrane liners.

PROBLEM On wet sites, present rules permit sand filters to be contained within 30 mil membrane liners to protect them against groundwater infiltration. However, aside from a minimum material thickness, rules fail to specify physical and chemical properties which require identification before the Department can determine if a liner is suitable for field use. Rules also do not specify appropriate methods for liner installation and maintenance.

DISCUSSION If membrane liners fail to prevent groundwater from entering sand filters, filter sands may become saturated. This would significantly interfere with the filter's capacity to purify septic tank effluent and could cause the filter or the drainfield receiving filtered effluent to hydraulically fail.

The proposed rule amendments and additions would specify minimum standards for unsupported membrane liner properties, liner installation and liner operation and maintenance.

PROPOSAL Amend OAR 340-71-295 as appropriate and add new rule OAR 340-73-085. Proposed amendments and additions are found in Appendix E.

XG767 (1)

DEPARTMENT OF ENVIRONMENTAL QUALITY

Explanation of proposed technical rule amendments considered by staff to be housekeeping in nature.

January 1982

OAR 340-71-105. This rule lists the "Glossary of Terms." It also repeats all of the definitions found in OAR 340-71-100. The proposed amendments would delete from the "Glossary of Terms" the duplicate definitions found in OAR 340-71-100, and renumber accordingly. In addition, the term "Family member" is added, and the terms "conditions associated with saturation," "cut-manmade", "Distribution box", and "Diversion valve" are amended to clarify the term, eliminate a conflict with other portions of the rules, or to delete inappropriate references.

OAR 340-71-120(1)(a). This rule addresses jurisdiction and policy, in terms of projected daily sewage flows. It conflicts with other portions of the rules dealing with sand filters. Conventional sand filters with projected sewage flows greater than six hundred (600) gallons per day, and other sand filter designs, must receive Department authorization. The proposed amendment would eliminate this conflict.

OAR 340-71-140(1)(b)(C). The plan review fee for systems serving commercial facilities with projected sewage flows greater than 5,000 gallons per day has been confusing because such systems are subject to Water Pollution Control Facilities (WPCF) controls, and are issued WPCF permits. Plan review is a part of the WPCF process. Therefore, an on-site sewage disposal systems plan review fee is not appropriate. The proposed amendments provide clarification.

OAR 340-71-150(4). When a potential site is evaluated for placement of an on-site system, specific siting criteria for standard and/or alternative systems is used. As currently written, reference to the specific criteria for each alternative system is missing. The proposed amendment would correct this omission.

OAR 340-71-150(5). This rule provides for site evaluation denial review after a site has been found unsuitable for placement of an on-site system. As originally adopted, the rule does not identify a time interval by which an application for denial review must be submitted, nor does it indicate a report would be prepared. The rule intent was that a denial review would be done soon after Agent denial, and that a report of the review would be written. The proposed amendments correct for these oversights.

OAR 340-71-165(1). This rule provides for permit denial review after a permit has been denied by an Agent. As originally adopted, the rules does not identify a time interval by which an application for denial review must be submitted. The rule intent was that a denial review would be done soon after Agent denial. The proposed amendment corrects for this oversight.

OAR 340-71-205(1). As adopted, the application procedures to be followed to obtain an Authorization Notice are not clear. It was assumed the permit application procedure would be followed. The proposed amendment would clarify this omission.

OAR 340-71-205(6). As originally adopted, this section of the rules pertaining to authorization notices is inconsistent with other sections of the same rule. The other sections use an increased projected flow rate limit of three hundred (300) gallons beyond the design capacity, or not more than fifty (50) percent, whichever is less. Through oversight the same limit was left out. The proposed amendment would provide consistency.

OAR 340-71-215(2). As written, this section of the Repair of Existing System rule could be applied more strictly than is warranted. When on-site systems placed in severe soils fail during the winter, it is often difficult if not impossible to effect a repair. Innovative design and/or frequent use of capping fills are needed. Due to soil moisture, some types of systems should not be installed until the soil is dry. The proposed rule would allow more flexibility for the Agent by allowing repairs to be made as the site conditions improve, and provides a mechanism to insure repairs will be made.

OAR 340-71-220. This rule addresses criteria for approval, design, and construction of standard systems. The proposed housekeeping amendments would correct the use of misleading terminology by replacing the term "absorption facility" with "disposal field" in subsection (1)(a), and substituting the term "absorption facility" for "disposal trench", "disposal system," and "drainfield" in sections 2 and 4. The proposed changes clarify without changing the standards or intent.

OAR 340-71-220(1)(d). Some soils that remain saturated become gray, without the presence of red, yellowish red, or brown mottles. The proposed amendment would correct for this oversight within the original rule.

OAR 340-71-220(2)(i). Reference to minimum setback requirements are found in two portions of the same rule. This is confusing for the Agent when referring to the rules. The proposed amendment would combine the information into one subsection, while deleting the other subsection (OAR 340-71-220(13)).

OAR 340-71-220(4)(d). The construction standards for septic tanks have been written in an inflexible way. This has caused difficulty in being able to approve some tanks that because of a minor technicality do not fully comply with the written standard, even though they will function equally as well as tanks that fully comply with the standards. As proposed, the amendment would provide flexibility, and would allow the Department to recognize new advances in design technology as they are proposed. When this flexibility is exercised, the Department would plan to amend the standard through rulemaking procedures.

OAR 340-71-220(8)(g). As adopted, this subsection is inconsistent with other portions of the rules. The soil texture (sandy loam) should be loamy sand. Further, because granular soils of this texture and coarser will slough into the trench, a permeable barrier along the sidewall is needed to prevent sloughing. The proposed amendment would correct this inconsistency.

OAR 340-71-220(12). With regard to materials used within on-site systems, Division 71 specifically addresses installation requirements, while Division 73 identifies the standard or criteria the material is manufactured to. As adopted, the installation requirement for effluent sewer pipe was illogically located in Division 73. The proposed amendment would place the installation requirements into Division 71.

OAR 340-71-220(13). Reference to minimum setback requirements are found in two portions of the same rule. This oversight is confusing to the Agent. The proposed amendment would combine the information into one subsection, and delete this section completely. The following section would be renumbered.

340-71-275. There are four minor amendments needed for this rule on pressurized distribution systems. An improper term, "drainfield," is used in referring to pressurized piping. The correct term is "distribution." Also, the reference to filter fabric states that soil particles will not pass through. Because filter fabrics are permeable to fluids, small soil particles (clay and silt) are capable of passing through. The original intent here was to prevent coarse textured soil particles within less cohesive soils from passing through. The filter fabrics being used in pressure systems are capable of preventing the passage of soil particles coarser than very fine sand. The use of seepage beds was intended to be limited to soils that were rapidly or very rapidly drained. They were not intended for use in finer textured soils. The language relating to seepage bed use was not clear as to the intent. The minimum depth requirement was also not consistent with other portions of the rules. The proposed amendments would correct for these deficiencies.

OAR 340-71-290(4). This rule deals with minimum seepage area requirements for soil absorption fields following sand filters and special site conditions where bottomless sand filters may be used instead of a standard soil absorption field. A housekeeping change is required in the table heading because it was overlooked when recommended seepage area was dropped from the table. The footnotes were difficult to understand and were not interpreted consistently. The proposed substitution is intended to clarify this part of the rule without changing the original intent.

OAR 340-71-295(1). This section dealing with conventional sand filter design is confusing, awkwardly written and inconsistent with other portions of the rules. The proposed amendment clarifies the language while keeping with the same intent, and corrects the minimum flow criteria for gray-water sand filters.

OAR 340-71-340(3). The proposed amendments correct grammatical errors.

OAR 340-71-345. Within the criteria for approval of aerobic sewage treatment facilities, reference is made to the National Sanitation Foundation (NSF) Standard No. 40 in that the treatment plants must conform to Class I or II and other requirements of the standard. The language would imply that the treatment plants would be tested pursuant to that

standard, but is confusing in that it does not specifically require that testing. Staff have reasoned that if a plant must conform to performance requirements of a standard, the plant should be tested according to that standard. The proposed amendments would clearly require a standard testing procedure. Subsection (f) of section (2) has been found to be confusing and unnecessary. When an aerobic treatment plant is used in a situation that conforms with the community systems definition, then the rules for community systems apply. The confusion would be eliminated by deleting subsection (f).

OAR 340-71-500(7). Legal council has advised this section requires denials to be conducted under formal contested case procedures. Many community systems serve commercial facilities and parcels larger than 10 acres, and therefore permit denials are by statute and rule required to be contested cases. There are also other community systems which do not serve such activities or parcels. Denials of permits for such systems are not required by statute to be contested cases. It was through oversight this section was placed into the community systems rule. If this section is deleted as proposed, it will affect only those few community system permit denials that are not otherwise provided the right of a contested case hearing.

OAR 340-71 - Diagram 9. The diagram of a typical sand filter was inadvertently drawn with a gravel mound around the underdrain pipe. It should have illustrated a gravel bed instead.

OAR 340-71 - Diagram 12. The pressure distribution trench illustration is in conflict with other portions of the rules. The proposed amendment corrects for this discrepancy.

OAR 340-71 - Diagrams 18 and 19. The references to man-made cut is proposed to be deleted because the diagrams do not illustrate a man-made cut.

OAR 340-73-025(5). Subsection (h) of this section requires the access cover above a septic tank fitting to be at least eight inches across. The intent was to allow access to the fitting should it become blocked. The Department received a request from a polyethylene septic tank manufacturer for approval of their septic tank, which complies with all construction requirements, except their access is only six inches across. It does meet the intent of the requirement. Staff feels the eight inch dimension is too restrictive and therefore is in support of the proposed amendment. Diagram 1 would also be revised.

OAR 340-73-035(4). As adopted the sump within the distribution box must two inches deep. This is too restrictive in that no latitude is allowed. The proposed amendment would provide for a minimum sump depth.

OAR 340-73-050(3) has been found by staff to be awkwardly worded, and unreasonable in requiring a dosing tank volume that may be as much as three times larger than the system design flow. The proposed amendments would clarify the language, and allow for lower volume dosing tanks for design flows less than four hundred fifty gallons per day.

OAR 340-73-060. With regard to materials used within on-site systems, Division 71 specifically addresses installation requirements, while Division 73 identifies the standard or criteria the material is manufactured to. As currently adopted the installation requirement for effluent sewer pipe is illogically located in Division 73. The proposed amendments would relocate the installation requirements into Division 71 and delete them from this rule.

DEPARTMENT OF ENVIRONMENTAL QUALITY

Proposed rule amendments

OAR 340-71-100 to OAR 340-71-600

and

OAR 340-73-025 to OAR 340-73-085

January 1982

340-71-105 GLOSSARY OF TERMS

Amend OAR 340-71-105

- (1) "Absorption facility" means a system of open-jointed or perforated piping, alternative distribution units, or other seepage systems for receiving the flow from septic tanks or other treatment facilities and designed to distribute effluent for oxidation and absorption by the soil within the zone of aeration. (See Diagrams 1 through 7 and 14 through 17)
- (2) "Aerobic sewage treatment facility" means a sewage treatment plant which incorporates a means of introducing air and oxygen into the sewage so as to provide aerobic biochemical stabilization during a detention period.
- [(3) "Agent" means the Director or his authorized representative.]
- [(4) "Alteration" means expansion and/or change in location of an existing system, or any part thereof.]
- (3) [(5)] "Alternative system" means any Commission approved on-site sewage disposal system used in lieu of, including modifications of, the standard subsurface system.
- (4) [(6)] "Authorization Notice" means a written document issued by the Agent which establishes that an on-site sewage disposal system appears adequate to serve the purpose for which a particular application is made.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

XG720 (1) 12-08-81

- [(7)] "Authorized representative" means the staff of the Department of Environmental Quality or the staff of the local unit of government performing duties for and under agreement with the Department of Environmental Quality.]
- (5) [(8)] "Automatic siphon" means a hydraulic device designed to rapidly discharge the contents of a dosing tank between predetermined water or sewage levels.
- (6) [(9)] "Bedroom" means any room within a dwelling which is accepted as such by the State of Oregon Department of Commerce building codes representative or the local authorized building official having jurisdiction.
- (7) [(10)] "Black waste" means human body wastes including feces, urine, other extraneous substances of body origin and toilet paper.
- (8) [(11)] "Building sewer" means that part of the system of drainage piping which conveys sewage into a septic tank, cesspool or other treatment facility that begins five feet (5) outside the building or structure within which the sewage originates. (See Diagrams 1, 2, 3, and 16)
- (9) [(12)] "Cesspool" means a lined pit which receives raw sewage, allows separation of solids and liquids, retains the solids and allows liquids to seep into the surrounding soil through perforations in the lining. (See Diagram 16)

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(10) [(13)] "Chemical recirculating toilet facility" means a toilet facility wherein black wastes are deposited and carried from the bowl by a combination of liquid waste and water which has been chemically treated and filtered.

(11) [(14)] "Chemical toilet facility" means a non-flushing, non-recirculating toilet facility wherein black wastes are deposited directly into a chamber containing a solution of water and chemical.

(12) [(15)] "Clayey Soil" means mineral soil that is over forty (40) percent clay that shrinks and develops wide cracks when dry and swells and shears when rewet forming slickensides and wedge-shaped structure. Clayey soil is very hard or extremely hard when dry, very firm when moist, and very sticky and very plastic when wet.

(13) [(16)] "Claypan" means a dense, compact clay layer in the subsoil. It has a much higher clay content than the overlying soil horizon from which it is separated by an abrupt boundary. Claypans are hard when dry and very sticky and very plastic when wet. They impede movement of water and air and growth of plant roots.

(14) [(17)] "Combustion or incineration toilet facility" means a toilet facility wherein black wastes are deposited directly into a combustion chamber for incineration.

[(18) "Commercial Facility" means any structure or building, or any portion thereof, other than a single family dwelling.]

[(19) "Commission" means the Environmental Quality Commission.]

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

[(20) "Community System" means an on-site system which will serve more than one (1) lot or parcel, or more than one (1) condominium unit; or more than one (1) unit of a planned unit development.]

(15) [(21)] "Completed Application" means one in which the application form is completed in full, is signed by the owner, is accompanied by all required exhibits and required fee, and is correct.

(16) [(22)] "Conditions associated with saturation" means:

- (a) Reddish brown or brown soil horizons with gray (chromas of 2 or less) and red or yellowish red mottles; or
- (b) Gray soil horizons, or gray soil horizons with red, yellowish red, or brown mottles; or
- (c) Dark colored highly organic soil horizons; or
- (d) Soil profiles with concentrations of soluble salt at or near the ground surface.

(17) [(23)] "Confining Layer" means a layer associated with an aquifer that because of its low permeability does not allow water to move through it perceptibly under head differences occurring in the groundwater system.

[(24) "Construction" means installation of a new system.]

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(18) [(25)] "Conventional sand filter" means a filter with two(2) feet of medium sand designed to filter and biologically treat septic tank or other treatment unit effluent from a pressure distribution system at an application rate not to exceed one and twenty-three hundredths (1.23) gallons per square foot sand surface area per day applied at a dose not to exceed twenty (20) percent of the projected daily sewage flow per cycle.

(19) [(26)] "Curtain drain" (in excess of thirty (30) inches) means a groundwater interceptor introduced upslope from a disposal field to intercept and divert ground water or surface water from the absorption facility, which may be required to be installed as a condition for approval of a system.

(20) [(27)] "Cut-manmade" (in excess of thirty (30) inches) means a land surface resulting from mechanical land shaping operations where one (1) or more layers that limit effective soil depth intersect the cut surface and where the modified slope is greater than fifty (50) percent, or any other man formed slopes in excess of fifty (50) percent which do not intersect one or more layers that limit effective soil depth. [See Diagrams 18 and 19.]

[(28) "Department" means the Department of Environmental Quality.]

[(29) "Director" means the Director of the Department of Environmental Quality.]

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (21) [(30)] "Disposal area" means the entire area used for underground dispersion of the liquid portion of sewage. It may consist of a seepage pit or of a disposal field or of a combination of the two. It may also consist of a cesspool or evapotranspiration system.
- (22) [(31)] "Disposal field" means a system of disposal trenches or a seepage trench or system of seepage trenches.
- (23) [(32)] "Disposal trench" means a ditch or trench with vertical sides and substantially flat bottom with a minimum of twelve (12) inches of clean, coarse filter material into which a single distribution line has been laid, the trench then being backfilled with a minimum of six (6) inches of soil. (See Diagram 12)
- (24) [(33)] "Distribution box" means a watertight structure which receives septic tank or other treatment facility effluent and distributes it concurrently into two (2) or more header pipes leading to the disposal area. (See Rule[s] 340-73-035 [through 340-73-045].)
- (25) [(34)] "Distribution pipe or lateral pipe" means an open-jointed or perforated pipe used in the dispersion of septic tank or other treatment facility effluent into disposal trenches, seepage trenches, or seepage beds. (See Diagrams 1 through 7 and 11)

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(26) [(35)] "Distribution unit" means a distribution box, dosing tank, diversion valve or box, header pipe, or other means of transmitting septic tank or other treatment unit effluent from the effluent sewer to the distribution pipes. (See Diagrams 1 through 7 and 11)

(27) [(36)] "Diversion valve" means a watertight structure which receives septic tank or other treatment facility effluent through one (1) inlet, distributes it to two (2) outlets, only one (1) of which is utilized at a given time (See Diagram 11 and Rule[s] 340-73-035 through] 340-73-045.)

(28) [(37)] "Dosing tank" means a watertight receptacle placed after a septic tank or other treatment facility equipped with an automatic siphon or pump designed to discharge treated effluent at a rate not to exceed twenty (20) percent of the projected daily sewage flow.

(29) [(38)] "Dosing Septic Tank" means as unitized device performing functions of both a septic tank and a dosing tank.

[(39)] "Dwelling" means any structure or building, or any portion thereof which is used, intended, or designed to be occupied for human living purposes including, but not limited to, houses, houseboats, boathouses, float houses, mobile homes, hotels, motels, and apartments.]

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(30) [(40)] "Effective seepage area" means the sidewall area within a disposal trench or a seepage trench from the bottom of the trench to a level two (2) inches above the distribution pipes, or the sidewall area of any cesspool, seepage pit, unsealed earth pit privy, or gray water waste disposal sump seepage chamber; or the bottom area of a seepage bed. (See Diagrams 12, 14, 15, 16, and 17)

(31) [(41)] "Effective soil depth" means the depth of soil material above a layer that impedes movement of water, air, and growth of plant roots. Layers that differ from overlying soil material enough to limit effective soil depth are hardpans, claypans, fragipans, compacted soil, bedrock, saprolite, and clayey soil.

(32) [(42)] "Effluent lift pump" means a pump used to lift septic tank or other treatment facility effluent to a higher elevation. (See Rule 340-73-055.)

(33) [(43)] "Effluent sewer" means that part of the system of drainage piping that conveys treated sewage from a septic tank or other treatment facility into a distribution unit or an absorption facility. (See Diagrams 1 through 7, 11, and 17, and Rule 340-73-060.)

(34) [(44)] "Emergency repairs" means repair of a failing system where immediate action is necessary to relieve a situation in which sewage is backing up into a dwelling or building, or repair of a broken pressure sewer line.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(35) [(45)] "Escarpment" means any naturally occurring slope greater than fifty (50) percent which extends vertically six (6) feet or more as measured from toe to top, and which is characterized by a long cliff or steep slope which separates two (2) or more comparatively level or gently sloping surfaces, and may intercept one (1) or more layers that limit effective soil depth. (See Diagrams 18 and 19)

(36) [(46)] "Evapotranspiration-Absorption (ETA) system" means an alternative system consisting of a septic tank or other treatment facility, effluent sewer and a disposal bed or disposal trenches, designed to distribute effluent for evaporation, transpiration by plants, and by absorption into the underlying soil. (See Diagrams 6 and 7)

[(47)] "Existing on-site sewage disposal system" (existing system) means any installed on-site sewage disposal systems constructed in conformance with the rules, laws and local ordinances in effect at the time of construction, or which would have conformed substantially with system design provided for in Commission, State Health Division, or State Board of Health Rules.]

(37) "FAMILY MEMBER" means any one (1) of two (2) or more persons related by blood or marriage.

[(48)] "Failing System" means any system which discharges untreated or incompletely treated sewage or septic tank effluent directly or indirectly onto the ground surface or into public waters.]

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(38) [(49)] "Filter material" means clean, washed gravel ranging from three quarters (3/4) to two and one-half (2 1/2) inches in size, or clean crushed rock ranging in size from one and one-half (1-1/2) to two and one-half (2-1/2) inches. (See Diagrams 6, 7, 9, 12, 14, 15, 16, and 17)

(39) [(50)] "Five-day biochemical oxygen demand" (5 day BOD) means the quantity of oxygen used in the biochemical oxidation of organic matter in five days at twenty (20) degrees centigrade under specified conditions and reported as milligrams per liter (mg/l).

(40) [(51)] "Fragipan" means a loamy subsurface horizon with high bulk density relative to the horizon above, seemingly cemented when dry, and weakly to moderately brittle when moist. Fragipans are mottled and low in organic matter. They impede movement of water, air, and growth of plant roots.

[(52)] "Governmental unit" means the state or any county, municipality, or political subdivision, or any agency thereof.]

(41) [(53)] "Grade" means the rate of fall or drop in inches per foot or percentage of fall of a pipe.

(42) [(54)] "Gray water" means household sewage other than "black wastes", such as bath water, kitchen waste water and laundry wastes.

(43) [(55)] "Groundwater interceptor" means any natural or artificial groundwater drainage system including agricultural drain tile, cut banks, and ditches. (See Diagram 13)

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (44) [(56)] "Hardpan" means a hardened layer in soil caused by cementation of soil particles with either silica, calcium carbonate, magnesium carbonate, or iron and/or organic matter. The hardness does not change appreciably with changes in moisture content. Hardpans impede movement of water and air and growth of plant roots.
- (45) [(57)] "Header Pipe" means a tight jointed part of the sewage drainage conduit which receives septic tank effluent from the distribution box, or drop box, or effluent sewer and conveys it to the disposal area. (See Diagrams 1 through 5, 7, 11, and 17)
- (46) [(58)] "Headwall" means a steep slope at the head or upper end of a land slump block or unstable landform. (See Diagrams 22 and 23)
- (47) [(59)] "Holding tank" means a watertight receptacle designed to receive and store sewage to facilitate disposal at another location.
- [(60) "Individual system" means a system that is not a community system.]
- (48) [(61)] "Individual water supply" means a source of water and a distribution system which serves a single residence or user for the purpose of supplying water for drinking, culinary, or household uses and which is not a public water supply system.
- (49) [(62)] "Industrial waste" means any liquid, gaseous, radioactive, or solid waste substance or a combination thereof resulting from any process of industry, manufacturing, trade, or business, or from the development or recovery of any natural resources.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (50) [(63)] "Intermittent stream" means any surface public water or groundwater interceptor that continuously flows water for a period of greater than two months in any one year, but not continuously for that year.
- (51) [(64)] "Invert" is the lowest portion of the internal cross section of a pipe or fitting. (See Diagram 12)
- [(65)] "Large system" means any on-site system with a daily sewage flow greater than two thousand five hundred (2,500) gallons.]
- (52) [(66)] "Mechanical oxidation sewage treatment facility" means an aerobic sewage treatment facility.
- (53) [(67)] "Medium sand" means a mixture of sand with 100 percent passing the 3/8 inch sieve, 90 percent to 100 percent passing the No. 4 sieve, 62 percent to 100 percent passing the No. 10 sieve, 45 percent to 82 percent passing the No. 16 sieve, 25 percent to 55 percent passing the No. 30 sieve, 5 percent to 20 percent passing the No. 50 sieve, 10 percent or less passing the No. 60 sieve, and 4 percent or less passing the No. 100 sieve.
- (54) [(68)] "Nonwater-carried waste disposal facility" means any toilet facility which has no direct water connection, including pit privies, vault privies and self-contained construction type chemical toilets.
- [(69)] "Occupant" means any person living or sleeping in a dwelling.]

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

[(70) "On-site sewage disposal system (system) "means any installed or proposed sewage disposal facility including, but not limited to a standard subsurface, alternative, experimental or non-water carried sewage disposal system, installed or proposed to be installed on land of the owner of the system or on other land as to which the owner of the system has the legal right to install the system.]

[(71) "Owner" means any person who alone, or jointly, or severally with others:

- (a) Has legal title to any lot, dwelling, or dwelling unit; or
- (b) Has care, charge, or control of any real property as agent, executor, executrix, administrator, administratrix, trustee, leasee, or guardian of the estate of the holder of legal title; or
- (c) Is the contract purchaser of real property.]

(55) [(72)] "Permanent ground water table" means the upper surface of a saturated zone that exists year-round. The thickness of the saturated zone, and, as a result, the elevation of the permanent ground water table may fluctuate as much as twenty (20) feet or more annually; but the saturated zone and associated permanent ground water table will be present at some depth beneath land surface throughout the year.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

[(73) "Permit" means the written permit issued by the Agent bearing the signature of the Agent which by its conditions authorizes the permittee to construct, install, alter, repair, or extend a subsurface or alternative sewage disposal system.]

[(74) "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the State and any agencies thereof, and the federal government and any agencies thereof.]

(56) [(75)] "Pollution" or "water pollution" means such alteration of the physical, chemical or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the state, which will or tends to, either by itself or in connection with any other substance, create a public nuisance or which will or tends to render such waters harmful, detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses or to livestock, wildlife, fish or other aquatic life or the habitat thereof.

(57) [(76)] "Portable toilet shelter" means any readily relocatable structure built to house a toilet facility.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (58) [(77)] "Pressure distribution lateral" means piping and fittings in pressure distribution systems which distribute septic tank or other treatment unit effluent to filter material through small diameter orifices. (See Diagrams 8, 9, and 12)
- (59) [(78)] "Pressure distribution manifold" means piping and fittings in a pressure distribution system which supply effluent from pressure transport piping to pressure distribution laterals. (See Diagrams 8 and 9)
- (60) [(79)] "Pressure distribution system" means any system designed to uniformly distribute septic tank or other treatment unit effluent under pressure in an absorption facility or sand filter. (See Diagrams 8 and 9)
- (61) [(80)] "Pressure transport piping" means piping which conveys septic tank or other treatment unit effluent to a pressure distribution manifold by means of a pump. (See Diagrams 8 and 9)
- (62) [(81)] "Prior approval" means a written approval for on-site sewage disposal, for a specific lot, issued prior to January 1, 1974.
- (63) [(82)] "Prior construction permit" means a subsurface sewage disposal system construction permit issued prior to January 1, 1974, by a county that had an ordinance requiring construction permits for subsurface sewage disposal systems.
- (64) [(83)] "Privy" means a structure used for disposal of human waste without the aid of water. It consists of a shelter built above a pit or vault in the ground into which human waste falls.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

[(84) "Public health hazard" means a condition whereby there are sufficient types and amounts of biological, chemical, or physical, including radiological, agents relating to water or sewage which are likely to cause human illness, disorders, or disability. These include, but are not limited to, pathogenic viruses, bacteria, parasites, toxic chemicals, and radioactive isotopes.]

[(85) "Public waters" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the State or within its jurisdiction.]

[(86) "Repair" means installation of all portions of a system necessary to eliminate a public health hazard or pollution of public waters created by a failing system.]

(65) [(87)] "Redundant disposal field system" means a system in which two complete disposal systems are installed, the disposal trenches of each system alternate with each other and only one system operates at a given time. (See Diagram 11)

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(66) [(88)] "Sand filter system" means the combination of septic tank or other treatment unit, dosing system with effluent pump(s) and controls, or dosing siphons piping and fittings, sand filter, absorption facility or effluent reuse method used to treat sewage. (See Diagrams 8 and 9)

(67) [(89)] "Sanitary drainage system" means that part of the system of drainage piping that conveys untreated sewage from a building or structure to a septic tank or other treatment facility, service lateral at the curb or in the street or alley, or other disposal terminal holding human or domestic sewage. The sanitary drainage system consists of a building drain or building drain and building sewer. (See Diagrams 1, 2, 3, and 16)

(68) [(90)] "Saprolite" means weathered material underlying the soil that grades from soft thoroughly decomposed rock to rock that has been weathered sufficiently so that it can be broken in the hands or cut with a knife. It does not include hard bedrock or hard fractured bedrock. It has rock structure instead of soil structure.

(69) [(91)] "Saturated zone" means a three (3) dimensional layer, lens, or other section of the subsurface in which all open spaces including joints, fractures, interstitial voids, pores, etc. are filled with ground water. The thickness and extent of a saturated zone may vary seasonally or periodically in response to changes in the rate or amount of ground water recharge or discharge. (See Diagram 20)

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (70) [(92)] "Scum" means a mass of sewage solids floating at the surface of sewage which is buoyed up by entrained gas, grease, or other substances.
- (71) [(93)] "Seepage area" see "effective seepage area."
- (72) [(94)] "Seepage bed" means an absorption system having disposal trenches wider than three (3) feet.
- (73) [(95)] "Seepage pit" means a "cesspool" which has a treatment facility such as a septic tank ahead of it. (See Diagram 17)
- (74) [(96)] "Seepage trench system" means a system with disposal trenches with more than six (6) inches of filter material below the distribution pipe.
- (75) [(97)] "Self-contained nonwater-carried waste disposal facility" includes, but is not limited to, vault privies, chemical toilets, combustion toilets, recirculating toilets, and portable toilets, in which all waste is contained in a watertight receptacle.
- (76) [(98)] "Septic tank" means a watertight receptacle which receives sewage from a sanitary drainage system, is designed to separate solids from liquids, digest organic matter during a period of detention, and allow the liquids to discharge to a second treatment unit or to a soil disposal system. (See Rules 340-73-025 and 340-73-030.)
- (77) [(99)] "Septic tank effluent" means partially treated sewage which is discharged from a septic tank.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

[(100) "Sewage" means water-carried human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such groundwater infiltration, surface waters, or industrial waste as may be present.]

(78) [(101)] "Sewage disposal service" means:

- (a) The installation of on-site sewage disposal systems, or any part thereof; or
- (b) The pumping out or cleaning of on-site sewage disposal systems, or any part thereof; or
- (c) The disposal of material derived from the pumping out or cleaning of on-site sewage disposal systems; or
- (d) Grading, excavating, and earth-moving work connected with the operations described in subsection (a) of this section, except streets, highways, dams, airports or other heavy construction projects and except earth-moving work performed under the supervision of a builder or contractor in connection with and at the time of the construction of a building or structure; or
- (e) The construction of drain and sewage lines from five (5) feet outside a building or structure to the service lateral at the curb or in the street or alley or other disposal terminal holding human or domestic sewage.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (79) [(102)] "Sewage stabilization pond" means a pond designed to receive the raw sewage flow from a dwelling or other building and retain that flow for treatment without discharge.
- (80) [(103)] "Slope" means the rate of fall or drop in feet per one hundred (100) feet of the ground surface. It is expressed as percent of grade.
- (81) [(104)] "Soil permeability rating" refers to that quality of the soil that enables it to transmit water or air, as outlined in the United States Department of Agriculture Handbook, Number 18, entitled Soil Survey Manual.
- (82) [(105)] "Soil separate" means the size of soil particles according to Table 7.
- (83) [(106)] "Soil texture" means the amount of each soil separate in a soil mixture. Field methods for judging the texture of a soil consist of forming a cast of soil, both dry and moist, in the hand and pressing a ball of moist soil between thumb and finger.
- (a) The major textural classifications are defined as follows:
(See Table 6.)
- (A) Sand: Individual grains can be seen and felt readily. Squeezed in the hand when dry, this soil will fall apart when the pressure is released. Squeezed when moist, it will form a cast that will hold its shape when the pressure is released, but will crumble when touched.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (B) Sandy loam: Consists largely of sand, but has enough silt and clay present to give it a small amount of stability. Individual sand grains can be readily seen and felt. Squeezed in the hand when dry, this soil will readily fall apart when the pressure is released. Squeezed when moist, it forms a cast that will not only hold its shape when the pressure is released, but will withstand careful handling without breaking. The stability of the moist cast differentiates this soil from sand.
- (C) Loam: Consists of an even mixture of sand and of silt and a small amount of clay. It is easily crumbled when dry and has a slightly gritty yet fairly smooth feel. It is slightly plastic. Squeezed when moist, it forms a cast that will not only hold its shape when the pressure is released, but will withstand careful handling without breaking. The stability of the moist cast differentiates this soil from sand.
- (D) Silt loam: Consists of a moderate amount of fine grades of sand, a small amount of clay, and a large quantity of silt particles. Lumps in a dry, undisturbed state appear quite cloddy, but they can be pulverized readily; the soil then feels soft and floury. When wet, silt loam runs together in puddles.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

Either dry or moist, casts can be handled freely without breaking. When a ball of moist soil is pressed between thumb and finger, it will not press out into a smooth, unbroken ribbon, but will have a broken appearance.

- (E) Clay loam: Consists of an even mixture of sand, silt, and clay, which breaks into clods or lumps when dry. When a ball of moist soil is pressed between the thumb and finger, it will form a thin ribbon that will readily break, barely sustaining its own weight. The moist soil is plastic and will form a cast that will withstand considerable handling.
- (F) Silty clay loam: Consists of a moderate amount of clay, a large amount of silt, and a small amount of sand. It breaks into moderately hard clods or lumps when dry. When moist, a thin ribbon or one-eighth (1/8) inch wire can be formed between thumb and finger that will sustain its weight and will withstand gentle movement.
- (G) Silty clay: Consists of even amounts of silt and clay and very small amounts of sand. It breaks into hard clods or lumps when dry. When moist, a thin ribbon or one-eighth (1/8) inch or less sized wire formed between thumb and finger will withstand considerable movement and deformation.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(H) Clay: Consists of large amounts of clay and moderate to small amounts of sand. It breaks into very hard clods or lumps when dry. When moist, a thin, long ribbon or one-sixteenth (1/16) inch wire can be molded with ease. Fingerprints will show on the soil, and a dull to bright polish is made on the soil by a shovel.

(b) These and other soil textural characteristics are also defined as shown in the United States Department of Agriculture Textural Classification Chart which is hereby adopted as part of these rules. This textural classification chart is based on the Standard Pipette Analysis as defined in the United States Department of Agriculture, Soil Conservation Service Soil Survey Investigations Report No. 1. (See Table 6)

(84) [(107)] "Soil with rapid or very rapid permeability" means:

- (a) Soil which contains thirty-five (35) percent or more of coarse fragments two (2) millimeters in diameter or larger by volume with interstitial soil of sandy loam texture or coarser as defined in subsection (106)(b) of this rule and as classified in Soil Textural Classification Chart, Table 6; or
- (b) Coarse textured soil (loamy sand or sand as defined in section (106) of this rule and as classified in Soil Textural Classification Chart, Table 6); or

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(c) Stones, cobbles, gravel, and rock fragments with too little soil material to fill interstices larger than one (1) millimeter in diameter.

(85) [(108)] "Standard subsurface system" means an on-site sewage disposal system consisting of a septic tank, distribution unit and gravity-fed absorption facility constructed in accordance with OAR 340-71-220(2), using six (6) inches of filter material below the distribution pipe, and maintaining not less than eight (8) feet of undisturbed earth between disposal trenches.

(86) [(109)] "Subsurface sewage disposal" means the physical, chemical or bacteriological breakdown and aerobic treatment of sewage in the unsaturated zone of the soil above any temporarily perched groundwater body.

(87) [(110)] "Subsurface disposal system" means a cesspool or the combination of a septic tank or other treatment unit and effluent sewer and absorption facility. (See Diagrams 1, through 6, 11, 16, and 17)

(88) [(111)] "Suspended solids" means solids in sewage that can be removed readily by standard filtering procedures in a laboratory and reported as milligrams per liter (mg/l).

[(112)] "System" see "On-site Sewage Disposal System".]

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (89) [(113)] "Temporary ground water table" means the upper surface of a saturated zone that exists only on a seasonal or periodic basis. Like a permanent ground water table, the elevation of a temporary ground water table may fluctuate. However, a temporary ground water table and associated saturated zone will dissipate (dry up) for a period of at least three (3) months each year.
- (90) [(114)] "Test pit" means an open pit dug to sufficient size and depth to permit thorough examination of the soil to evaluate its suitability for subsurface sewage disposal.
- (91) [(115)] "Toilet facility" means a fixture housed within a toilet room or shelter for the purpose of receiving black waste.
- (92) [(116)] "Unstable landforms" means areas showing evidence of mass downslope movement such as debris flow, landslides, rockfalls, and hummocky hillslopes with undrained depressions upslope. Unstable landforms may exhibit slip surfaces roughly parallel to the hillside; landslide scars and curving debris ridges; fences, trees, and telephone poles which appear tilted; or tree trunks which bend uniformly as they enter the ground. Active sand dunes are unstable landforms. (See Diagrams 21, 22, and 23)
- (93) [(117)] "Zone of aeration" means the unsaturated zone that occurs below the ground surface and above the point at which the upper limit of the water table exists. (See Diagram 20)

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

Amend OAR 340-71-120(1)(a) as follows:

340-71-120 JURISDICTION AND POLICY.

- (a) Systems of twenty five hundred (2500) gallons or less shall have site evaluations, plan review, permits and inspections conducted or processed by the Agent, unless otherwise required within these rules. Plan review may be done by the Department at Agent's request.

Amend OAR 340-71-130(11) as follows:

340-71-130 GENERAL STANDARDS, PROHIBITIONS AND REQUIREMENTS.

(11) Property Line Crossed.

- (a) A recorded utility easement is required whenever a system crosses a property line separating properties under different ownership. The easement must accommodate that part of the system, including setbacks, which lies beyond the property line, and must allow entry to install, maintain and repair the system.

- (b) Whenever an on-site system is located on one lot or parcel and the facility it serves is on a contiguous or adjacent lot or parcel under the same ownership, the owner shall execute and record in the county land title records an affidavit which notifies prospective property purchasers of this fact in a form approved by the Department.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

Amend OAR 340-71-140(1)(b)(C) as follows:

ON-SITE SEWAGE DISPOSAL SYSTEMS	MAXIMUM FEE
------------------------------------	----------------

- (C) Commercial Facility System, Plan Review:
- (i) For first 1000 gallons projected daily sewage flow \$ 50
 - (ii) Plus for each 500 gallons or part thereof above 1000 gallons , to a maximum sewage flow limit of 5,000 gallons per day \$ 10
 - (iii) Plan review for systems with projected sewage flows greater than 5,000 gallons per day shall be pursuant to OAR 340, Division 52.

Amend OAR 340-71-140(1)(b)(E) as follows:

- (E) Construction-Installation Permit Renewal:
- (i) If Field Visit Required..... \$ 50
 - (ii) No Field Visit Required..... \$ 10

NOTE: Renewal of a permit may be granted to the original permittee if work on the on-site system has commenced and an application for permit renewal is filed prior to the original permit expiration date.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

Amend OAR 340-71-140(4) as follows:

(4) Surcharge. In order to offset a portion of the administrative costs of the statewide on-site sewage disposal program, a surcharge for each activity, as set forth in the following schedule, shall be levied by the Department and by each Agreement County. Proceeds from surcharges collected by the Department and Agreement Counties shall be accounted for separately. Each Agreement County shall forward the proceeds to the Department as negotiated in the memorandum of agreement (contract) between the county and the Department.

Activity	Surcharge
(a) Site evaluation: per lot <u>or site</u> ; or for each 1,000 gallons projected daily sewage flow or part thereof, <u>whichever is greater.</u> up to 5,000 gallons	\$ 15
(b) New Construction Installation Permit	\$ 5
<u>(c) Alteration permit</u>	<u>\$ 5</u>
<u>(d) Repair permit</u>	<u>\$ 5</u>
<u>(e) Authorization Notice</u>	<u>\$ 5</u>

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

Amend OAR 340-71-150(4) as follows:

340-71-150 SITE EVALUATION PROCEDURES.

(4) Approval or Denial.

(a) In order to obtain an approved site evaluation report the following conditions shall be met:

(A) All criteria for approval as outlined in Rules 340-71-220 and/or 340-71-260 through 340-71-355 shall be met.

Amend OAR 340-71-150(5) as follows:

(5) Site Evaluation Denial Review. A site evaluation denied by the Agent shall be reviewed at the request of the applicant. The application for review shall be submitted to the Department in writing, within thirty (30) days of the site evaluation report issue date, and be accompanied by the denial review fee. The review shall be conducted and a report prepared by the Department.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

Amend OAR 340-71-165(1) as follows:

340-71-165 PERMIT DENIAL REVIEW.

- (1) A permit denied by the Agent shall be reviewed at the request of the applicant. The application for review shall be submitted to the Department in writing, within thirty (30) days of the permit denial notice from the Agent, and be accompanied by the denial review fee. The denial review shall be conducted and a report prepared by the Department.

Amend OAR 340-71-185 as follows:

- (1) The owner shall abandon a system when:
 - (a) A sewerage system becomes available and the building sewer has been connected thereto; or
 - (b) The source of sewage has been permanently eliminated; or
 - (c) The system [is failing and cannot be repaired; or] has been operated in violation of OAR 340-71-130(13), unless and until a repair permit and Certificate of Satisfactory Completion are subsequently issued therefor; or

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (d) The system has been constructed [without a permit and cannot be brought into compliance with these rules; or] , installed, altered, or repaired without a required permit authorizing same, unless and until a permit is subsequently issued therefor; or
- (e) The system has been operated or used without a required Certificate of Satisfactory Completion[,] or Authorization Notice authorizing same , [and cannot be brought into conformance with these rules.] unless and until a Certificate of Satisfactory Completion or Authorization Notice is subsequently issued therefor.

Amend OAR 340-71-205(1) as follows:

- (1) For the purpose of these rules, "Authorization Notice" means a written document issued by the Agent which establishes that an on-site sewage disposal system appears adequate to serve the purpose for which a particular application is made. Applications for Authorization Notices shall conform to requirements of OAR 340-71-160(2) and (4).

Amend OAR 340-71-205(6) as follows:

- (6) Only one (1) Authorization Notice for an increase up to three hundred (300) gallons beyond the design capacity, or increased by not more than fifty (50) percent of the design capacity, whichever is less, [per system] will be allowed[.] per system.

NOTE: Underlined ____ material is new.
Bracketed [] material is deleted.

Amend OAR 340-71-215(2) as follows:

(2) A failing system shall be immediately repaired.

Exception: If in the opinion of the Agent adverse soil conditions exist due to climatic conditions that would likely preclude a successful repair, the Agent may allow a delay in commencing repairs until the soil conditions improve. If this exception is exercised, a compliance date shall be specified in a Notice of Violation to the system owner.

Amend OAR 340-71-220 as follows:

(1) For the purpose of these rules:

- (a) "Standard subsurface system" means an on-site sewage disposal system consisting of a septic tank, distribution unit and gravity-fed [absorption facility] disposal field constructed in accordance with section (2) of this rule, using six (6) inches of filter material below the distribution pipe, and maintaining not less than eight (8) feet of undisturbed earth between disposal trenches.
- (b) "Effective Soil Depth" means the depth of soil material above a layer that impedes movement of water, air, or growth of plant roots. Layers that differ from overlying soil material enough to limit effective soil depths are hardpans, claypans, fragipans, compacted soil, bedrock, saprolite and clayey soil.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (c) "Large System" means any on-site system with a daily sewage flow greater than two thousand five hundred (2,500) gallons.
 - (d) "Conditions Associated with Saturation" means:
 - (A) Reddish brown or brown soil horizons with gray (chromas of two or less) and red or yellowish red mottles; or
 - (B) Gray soil horizons, or gray soil horizons with red, yellowish red or brown mottles; or
 - (C) Dark colored highly organic soil horizons; or
 - (D) Soil profiles with concentrations of soluble salts at or near the ground surface.
- (2) Criteria For Standard Subsurface System Approval. In order to be approved for a standard subsurface system each site must meet all the following conditions:
- (a) Effective soil depth shall extend thirty (30) inches or more from the ground surface as shown in Table 3. A minimum six (6) inch separation shall be maintained between the layer that limits effective soil depth and the bottom of the [disposal trench.] absorption facility.
 - (b) Water table levels shall be predicted using "conditions associated with saturation." If conditions associated with saturation do not occur in soil with rapid or very rapid permeability, predictions of the highest level of the water

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

table shall be based on past recorded observations of the Agent. If such observations have not been made, or are inconclusive, the application shall be denied until observations can be made. Groundwater level determinations shall be made during the period of the year in which high groundwater normally occurs in that area.

- (A) A permanent water table shall be four (4) feet or more from the bottom of the [disposal trench.] absorption facility.

Exception: In defined geographic areas where the Department has determined through a groundwater study that degradation of groundwater would not be caused nor public health hazards created. In the event this exception is allowed, the rule pertaining to a temporary water table shall apply.

- (B) A temporary water table shall be twenty-four (24) inches or more below the ground surface. A n [disposal trench] absorption facility shall not be installed deeper than the level of the temporary water table.
- (C) Curtain Drains. (Diagram 13) A curtain drain may be used to intercept and/or drain temporary water from a disposal area, however, it may be required to demonstrate that the site can be de-watered prior to

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

issuing a construction installation permit. Curtain drains may be used only on sites with adequate slope to permit proper drainage. Where required, curtain drains are an integral part of the disposal system.

- (c) Soil with rapid or very rapid permeability shall be thirty six (36) inches or more below the ground surface. A minimum eighteen (18) inch separation shall be maintained between soil with rapid or very rapid permeability and the bottom of disposal trenches.

Exception: Sites may be approved with no separation between the bottom of disposal trenches and soil as defined in OAR 340-71-105, 107 (a) and (b), with rapid or very rapid permeability, and disposal trenches may be placed into soil as defined in OAR 340-71-105, 107(a) and (b), with rapid or very rapid permeability if any of the following conditions occur:

- a- A confining layer occurs between the bottom of disposal trenches and the ground water table. A minimum six (6) inch separation shall be maintained between the bottom of disposal trenches and the top of the confining layer; or
- b- A layer of soil with sandy loam texture or finer at least eighteen (18) inches thick occurs between the

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

bottom of the disposal trenches and the ground water table; or

- c- The projected daily sewage flow does not exceed a loading rate of four hundred fifty (450) gallons per acre per day.
- (d) Slopes shall not exceed thirty (30) percent and the slope/depth relationship set forth in Table 3.
- (e) The site has not been filled or the soil has not been modified in a way that would, in the opinion of the Agent, adversely affect functioning of the system.
- (f) The site shall not be on an unstable land form, where operation of the system may be adversely affected.
- (g) The site of the initial and replacement [drainfield] absorption facility shall not be covered by asphalt or concrete, or subject to vehicular traffic, livestock, or other activity which would adversely affect the soil.
- (h) The site of the initial and replacement [drainfield] absorption facility will not be subjected to excessive saturation due to, but not limited to, artificial drainage of ground surfaces, driveways, roads, and roof drains.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(i) Setbacks in Table 1 can be met.

(A) Stream Setbacks. Setback from streams shall be measured from bank drop-off or mean yearly highwater mark, whichever provides the greatest separation distance.

(B) Lots Created Prior to May 1, 1973. For lots or parcels legally created prior to May 1, 1973, the Agent may approve installation of a standard or alternative system with a setback from surface public waters of less than one hundred (100) feet but not less than fifty (50) feet, provided all other provisions of these rules can be met.

(C) Water Lines and Sewer Lines Cross. Where water lines and building or effluent sewer lines cross, separation distances shall be as required in the State Plumbing Code.

(D) Septic Tank Setbacks. The Agent shall encourage the placement of septic tanks and other treatment units as close as feasible to the minimum separation from the building foundation in order to minimize clogging of the building sewer.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

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Amend OAR 340-71-220(4) (a) as follows:

(4) Septic Tanks

- (a) For the purpose of these rules, "Septic Tank" means a watertight receptacle which receives sewage from a sanitary drainage system, is designed to separate solids from liquids, digest organic matter during a period of detention, and allow the liquids to discharge to a second treatment unit or to a soil [disposal system.] absorption facility.

Amend OAR 340-71-220(4) (d) as follows:

- (d) Construction. Septic tank construction shall comply with minimum standards set forth in Rules 340-73-025 and 340-73-030[.] ,unless otherwise authorized in writing by the Department.

Amend OAR 340-71-220(8) (g) as follows:

- (g) Where trenches are installed in [sandy loam] loamy sand or coarser soils, [the filter material shall be covered with] filter fabric or other non-degradable material approved by the Agent[.] shall be used to line the trench sidewall and cover the filter material.

Amend 340-71-220(12) as follows:

- (12) Effluent Sewer. (Rule 340-73-060) The effluent sewer shall extend at least five (5) feet beyond the septic tank before connecting to the distribution unit. It shall be installed with a minimum

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

fall of four (4) inches per one hundred (100) feet, but in no instance shall there be less than two (2) inches of fall from one end of the pipe to the other.

Amend OAR 340-71-220(13) by deleting the entire subsection as follows:

[(13) Minimum Separation Distances.

- (a) On-site systems or parts thereof shall not be installed closer than the indicated distances from the items in Table 1.
- (b) Stream Setbacks. (Table 1) Setback from streams shall be measured from bank drop-off or mean yearly high water mark, whichever provides the greatest separation distance.
- (c) Lots Created Prior to May 1, 1973. For lots or parcels legally created prior to May 1, 1973, the Agent may approve installation of a standard or alternative system with a setback from surface public waters of less than one hundred (100) feet but not less than fifty (50) feet, provided all other provisions of these rules can be met.
- (d) Water Lines and Sewer Lines Cross. Where water lines and building or effluent sewer lines cross, separation distances shall be as required in the State Plumbing Code.
- (e) Septic Tank Setbacks. (Table 1) The Agent shall encourage the placement of septic tanks and other treatment units

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

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as close as feasible to the minimum separation from the building foundation in order to minimize clogging of the building sewer.]

Amend OAR 340-71-220(14) as follows:

13 [(14)] Large Systems. Systems with a projected daily sewage flow greater than two thousand five hundred (2,500) gallons shall be designed in accordance with requirements set forth in Rule 340-71-520.

Amend OAR 340-71-275(4) (b) as follows:

(b) Pressurized [Drainfield] Distribution Piping. Piping, valves and fittings for pressurized systems shall meet the following minimum requirements:

Amend OAR 340-71-275(4) (c) (D) as follows:

(D) The sides of the trench and top of the filter material shall be lined or covered with filter fabric, or other nondegradable material permeable to fluids that will not allow passage of soil particles[.] coarser than very fine sand. In soils finer textured than loamy sand, lining the sidewall may not be required.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

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Amend OAR 340-71-275(4) (d) as follows:

(d) Seepage Bed Construction.

- (A) Seepage beds may only be used in soil as defined in OAR 340-71-105, 107(a) and (b) as an alternative to the use of disposal trenches.
- (B) The effective seepage area shall be based on the bottom area of the seepage bed. The minimum area shall be not less than that specified in Table 9.
- (C) Beds shall be installed not less than [eighteen (18)] twenty four (24) inches (twelve (12) inches with a capping fill) nor deeper than thirty six (36) inches into the natural soil. The seepage bed bottom shall be level.
- (D) The top of the filter material shall be lined or covered with filter fabric, or other nondegradable material that is permeable to fluids but will not allow passage of soil particles[.] coarser than very fine sand.
- (E) Pressurized distribution piping shall have not less than eight (8) inches of filter material below, nor less than two (2) inches of filter material above the piping.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (F) Pressurized distribution piping shall be horizontally spaced not more than four (4) feet apart, and not more than two (2) feet away from the seepage bed sidewall. At least two (2) parallel pressurized distribution pipes shall be placed in the seepage bed.
- (G) A minimum of ten (10) feet of undisturbed earth shall be maintained between seepage beds.

Amend OAR 340-71-290(4) as follows:

- (4) Minimum Length Disposal Trench Required. The [recommended and] minimum seepage area required for sand filter absorption facilities is indicated in the following table:

<u>Soil Groups</u>	<u>Minimum Length (Linear Feet) Disposal Trench Per One Hundred Fifty (150) Gallons Projected Daily Sewage Flow</u>
	<u>Minimum</u>
Gravel, sand, loamy sand, sandy loam	35
Loam, silt loam, sandy clay loam, clay loam	45
Silty clay loam, silty clay, sandy clay, clay	50
Saprolite or fractured bedrock	50
High shrink-swell clays (Vertosols)	75

FOOTNOTE [S]:

- [(1) Sites with gravel or soil textures of sand, loamy sand, or sandy loam to the ground surface, that meet all other requirements of sections 340-71-290(3) and (4) and have the water table

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

twenty-four (24) inches or more below ground surface, may utilize a sand filter without a bottom that discharges treated effluent directly into these materials. A minimum twenty-four (24) inch separation must be maintained between the water table and the bottom of the sand filter.]

- [(2) Sites with saprolite or fractured bedrock where groundwater is six (6) feet or greater below ground surface may utilize a sand filter consisting of a trench four (4) feet deep with two (2) feet of medium sand to filter and biologically treat septic tank effluent from a pressure distribution system at an application rate not to exceed one and twenty-three hundredths (1.23) gallons per square foot sand surface area per day applied at a dose not to exceed twenty (20) percent of the projected daily sewage flow. A two (2) foot separation shall be maintained between the bottom of the sand filter and the upper surface of ground water. Slope shall not exceed thirty (30) percent.]

Sites with saprolite, fractured bedrock, gravel or soil textures of sand, loamy sand, or sandy loam in a continuous section at least two (2) feet thick in contact with and below the bottom of the sand filter, that meet all other requirements of section 340-71-290(3), may utilize either a conventional sand filter without

NOTE: Underlined ____ material is new.
Bracketed [] material is deleted.

a bottom or a sand filter in a trench that discharges biologically treated effluent directly into those materials. The application rate shall be based on the design sewage flow in OAR 340-71-295(1) and the basal area of the sand in either type of sand filter. A minimum twenty-four (24) inch separation shall be maintained between a water table and the bottom of the sand filter.

Amend OAR 340-71-295 as follows:

340-71-295 CONVENTIONAL SAND FILTER DESIGN AND CONSTRUCTION.

(Diagrams 8 and 9)

(1) Sewage Flows:

(a) [Conventional sand filter systems shall be designed to serve sewage flows of] Design sewage flows for a system proposed to serve a commercial facility shall be limited to six hundred (600) gallons or less per day unless otherwise authorized in writing by the Department.

(b) [Flows of four hundred fifty (450) gallons per day shall be used in determining the minimum sand surface area required for a single-family dwelling.]

Design sewage flows for a system proposed to serve a single family dwelling shall not be less than four hundred

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

fifty (450) gallons per day, except as provided in subsection (c).

- (c) [Flows of two hundred (200) gallons per day shall be used in determining minimum sand surface area required for individual residential gray-water filters.]

Design sewage flows for a system proposed to receive gray water only from a single family dwelling shall not be less than three hundred (300) gallons per day.

- (2) Minimum Filter Area. Sand filters shall be sized based on an application rate of no more than one and twenty-three hundredths (1.23) gallons septic tank effluent per square foot medium sand surface per day.

[(3) General Details.]

(3) [(a)] Sand filter container, piping, medium sand, gravel, gravel cover, and soil crown material for a sand filter system discharging to disposal trenches shall meet minimum specifications indicated in Diagrams 8 and 9 unless otherwise authorized by the Department.

[(b) Filter containers shall be constructed of reinforced concrete, a thirty (30) mil liner or other membrane liners acceptable to the Department which will effectively exclude groundwater and will contain the sand, gravel, septic tank

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

effluent and soil crown cover for at least a twenty (20) year service life.]

(4) Container Design and Construction.

(a) A reinforced concrete container consisting of floor and walls as shown in Diagrams 8 and 9 is required where water tightness is necessary to prevent groundwater from infiltrating into the filter.

(b) Container may be constructed of materials other than concrete where equivalent function, workmanship, watertightness and at least a twenty (20) year service life can be documented.

(A) Flexible membrane liner (FML) materials must have properties which are at least equivalent to thirty (30) mil unreinforced polyvinyl chloride (PVC) described in OAR 340-73-085. To be approved for filter installation, FML materials must:

(i) Have field repair instructions and materials which are provided to the purchaser with the liner; and

(ii) Have factory fabricated "boots" suitable for field bonding onto the liner to facilitate the passage of piping through the liner in a waterproof manner.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(B) Where accepted for use, flexible sheet membrane liners shall be placed against relatively smooth, regular surfaces. Surfaces shall be free of sharp edges, corners, roots, nails, wire, splinters and other projections which might puncture, tear, or cut the liner. Where a smooth, uniform surface cannot be assured in the field, filter system plans must include specifications for liner protection. A four (4) inch bed of clean sand or a non-degradable filter fabric acceptable to the Agent, shall be used to provide liner protection.

Amend OAR 340-71-330(2) as follows:

(2) Criteria for approval.

- (a) Nonwater-carried waste disposal facilities shall not be installed or used without prior written approval of the Agent.

Exception: Temporary use pit privies used on farms for farm labor shall be exempt from approval requirements.

- (b) Nonwater-carried waste disposal facilities may be approved for temporary or limited use areas, such as recreation parks, camp sites, seasonal dwellings, farm labor camps or construction sites, provided all liquid wastes can be

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

handled in a manner to prevent a public health hazard and to protect public waters, provided further that the separation distances in Table 8 can be met.

Exception: The use of self-contained construction type chemical toilets is limited to construction sites, farm labor camps, county fairs and rodeos, or similar uses.

340-71-340 HOLDING TANKS.

Amend OAR 340-71-340(3) as follows:

(3) General.

- (a) No building may be served by more than one (1) holding tank.
- (b) A single tax lot may be served by no more than one (1) holding tank unless the holding tanks [is] are under control of a municipality as defined in ORS 454.010(3).

Amend OAR 340-71-345(2) as follows:

340-71-345 AEROBIC SYSTEMS.

(1) For the purpose of these rules:

- (a) "Aerobic Sewage Treatment Facility" means a sewage treatment plant which incorporates a means of introducing air (oxygen) into the sewage so as to provide aerobic biochemical stabilization during a detention period.
- (b) "Mechanical Oxidation Sewage Treatment Facility" means an aerobic sewage treatment facility.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

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- (2) Criteria For Approval. Aerobic sewage treatment facilities may be approved for a construction installation permit provided all the following criteria are met:
- (a) The daily sewage flow to be treated is less than five thousand (5000) gallons.
 - (b) The aerobic sewage treatment facility (plant) is part of an approved on-site sewage disposal system.
 - (c) The plant has been tested pursuant to [conforms to Class I or Class II and other requirements of] the current version of the National Sanitation Foundation (NSF) Standard No. 40, relating to Individual Aerobic Wastewater Treatment Plants, [adopted by the National Sanitation Foundation (NSF).] and been found to conform with Class I or Class II and other requirements of the standard. In lieu of NSF testing, [Class I or Class II certification,] the Department may accept testing by another agency which it considers to be equivalent.
 - (d) The property owner records a Department approved affidavit which notifies prospective property purchasers of the existence of an aerobic sewage treatment facility.
 - (e) The owner acknowledges that proper operation and maintenance of the plant is essential to prevent failure of the entire

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

sewage disposal system and agrees, in writing, to hold the State of Oregon, its officers, employees, and agents harmless of any and all loss and damage caused by defective installation or operation of the system.

[(f) The rules for Community System contained in OAR 340-71-500 shall apply where applicable.]

Amend OAR 340 Division 71 by adding a new rule 340-71-355 as follows:

340-71-355 Gravel-less Disposal Trench Systems.

- (1) Gravel-less disposal trench systems may be permitted on any site meeting the requirements for installation of standard subsurface systems.
- (2) Distribution pipes for gravel-less disposal trench systems shall conform to the requirements in OAR 340-73-060(2)(f).
- (3) Gravel-less disposal trenches shall be constructed pursuant to the standards identified in OAR 340-71-220.

Exceptions:

- (a) The bottom trench width shall not be less than eighteen (18) inches wide; and
- (b) The provisions of OAR 340-71-220(8)(e), (f), and (g) are not applicable.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

340-71-415 FORMAL VARIANCES.

Amend OAR 340-71-415 as follows:

- (1) Variances from any rule or standard for on-site sewage systems, contained in these rules, may be granted to applicants for permits by the Commission after a hearing before a special variance officer. The variance officer shall make a recommendation to the Commission for or against the variance.
- (2) Variances from any standard contained in Rules 340-71-220 and 340-71-260 through 340-71-315 and 340-71-355 may be granted to applicants for permits by special variance officers appointed by the Director.
- (3) No variance may be granted unless the special variance officer finds, or in the case of an appeal to the Commission, the Commission finds that:
 - (a) Strict compliance with the rule or standard is inappropriate for cause; or
 - (b) Special physical conditions render strict compliance unreasonable, burdensome, or impractical.

(4) [(3)] Applications.

- (a) Applications shall be made to the Department or Agreement County as appropriate. A separate application must be filed for each site considered for a variance.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (b) Each application shall be accompanied by:
- (A) A site evaluation report [denial, if the parcel has been denied, (unless waived by the variance officer)];
and
 - (B) Plans and specifications for the proposed system; and
 - (C) The appropriate fee; and
 - (D) Other information necessary for rendering a proper decision; and
 - (E) The application shall be signed by the property owner.

(5) [(4)] An applicant for a variance under this rule is not required to pay the application fee, if at the time of filing, the applicant:

- (a) Is sixty-five (65) years of age or older; and
- (b) Is a resident of the State of Oregon; and
- (c) Has an annual household income, as defined in ORS 310.030, of \$15,000 or less[.] ; and
- (d) Has not previously applied under the provisions of this section.

Amend OAR 340-71-435 as follows:

- (1) After a variance is granted the appropriate Agent shall be notified in writing.
- (2) In nonagreement counties the Department shall issue system construction installation permits, perform necessary inspections and issue Certificates of Satisfactory Completion.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(3) In agreement counties, the county shall issue system construction installation permits, perform necessary inspections and issue Certificates of Satisfactory Completion.

[(4) The Department shall disburse forty (40) dollars of the variance fee per granted variance to the agreement county, in which the property is located, to defray costs of permit and certificate issuance and inspections.]

340-71-500 COMMUNITY SYSTEMS.

Amend OAR 340-71-500

(1) For the purpose of these rules:

(a) "Community System" means an on-site system which will serve more than one (1) lot or parcel; or more than one (1) condominium unit; or more than one (1) unit of a planned unit development.

(b) "Person" means individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the State and any agencies thereof, and the federal government and any agencies thereof.

(2) Without first applying for and obtaining a construction installation permit, no person shall install a community on-site system.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (3) Proposed community systems with projected sewage flows greater than two thousand five hundred (2,500) gallons per day shall have plans reviewed and approved by the Department prior to construction permit issuance.
- (4) Plans for all community systems shall include operation and maintenance details including details for financing system operation and maintenance.
- (5) The site criteria for approval of community systems shall be the same as required for standard subsurface systems contained in section 340-71-220(2), or in the case of community alternative systems, the specific site conditions for that system contained in rules 340-71-260 through 340-71-345.
- (6) Operation Responsibility.
 - (a) Responsibility for operation and maintenance of community systems shall be vested in a municipality as defined in ORS 454.010(3), or an Association of Unit Owners as defined in ORS 91.500 and ORS 91.527.
 - (b) Unless otherwise required by permit, community systems shall be inspected at least annually by the responsible entity.
- [(7) Denial of construction installation permits for community systems may be appealed through the contested case procedure set forth in ORS 183.]

Proposed Amendments to OAR 340-71-600

340-71-600 SEWAGE DISPOSAL SERVICE.

- (1) For the purpose of these rules "Sewage Disposal Service" means:
 - (a) The installation of on-site sewage disposal systems, or

any part thereof; or
NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (b) The pumping out or cleaning of on-site sewage disposal systems, or any part thereof; or
 - (c) The disposal of material derived from the pumping out or cleaning of on-site sewage disposal systems; or
 - (d) Grading, excavating, and earth-moving work connected with the operations described in subsection (1) of this rule, except streets, highways, dams, airports or other heavy construction projects and except earth-moving work performed under the supervision of a builder or contractor in connection with and at the time of the construction of a building or structure; or
 - (e) The construction of drain and sewage lines from five (5) feet outside a building or structure to the service lateral at the curb or in the street or alley or other disposal terminal holding human or domestic sewage.
- (2) No person shall perform sewage disposal services or advertise or represent himself/herself as being in the business of

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

performing such services without first obtaining a license from the Department. Licenses are not transferable.

(3) Those persons making application for a sewage disposal service license shall:

(a) Complete an application form supplied by the Department;
and

(b) [Execute a surety bond in the penal sum of two thousand five hundred (\$2500) dollars in favor of the State of Oregon, on forms supplied by the Department. Bonds shall be written to coincide with the licensing period; and]

File and maintain with the Department original evidence of surety bond, or other approved equivalent security, in the penal sum of two thousand five hundred dollars (\$2,500);
and

(c) Shall have pumping equipment inspected by the Agent annually if intending to pump out or clean systems and shall complete the "Sewage Pumping Equipment Description/Inspection" form supplied by the Department. An inspection performed after January 1st shall be accepted for licensing the following July 1st; and

(d) Provide evidence of registration of business name with State Department of Commerce.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(e) Submit the appropriate fee as set forth in Subsection 340-71-140(1)(k).

(4) The type of security to be furnished pursuant to OAR

340-71-600(3)(b) may be:

(a) Surety bond executed in favor of the State of Oregon on a form approved by the Attorney General and provided by the Department. The bond shall be issued by a surety company licensed by the Insurance Commissioner of Oregon. Any surety bond shall be so conditioned that it may be cancelled only after forty five (45) days notice to the Department, and to otherwise remain in effect for not less than two (2) years following termination of the sewage disposal service license, except as provided in subsection (e) of this section; or

(b) Insured savings account irrevocably assigned to the Department, with interest earned by such account made payable to the depositor; or

(c) Negotiable securities of a character approved by the State Treasurer, irrevocably assigned to the Department, with interest earned on deposited securities made payable to the depositor.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(d) Any deposit of cash or negotiable securities under ORS 454.705 shall remain in effect for not less than two (2) years following termination of the sewage disposal service license except as provided in subsection (e) of this section. A claim against such security deposits must be submitted in writing to the Department, together with an authenticated copy of:

(A) The court judgment or order requiring payment of the claim; or

(B) Written authority by the depositor for the Department to pay the claim

(e) When proceedings under ORS 454.705 have been commenced while the security required is in effect, such security shall be held until final disposition of the proceedings is made. At that time claims will be referred for consideration of payment from the security so held.

(5) [(4)] Each licensee shall:

(a) Be responsible for any violation of any statute, rule, or order of the Commission or Department pertaining to his licensed business.

(b) Be responsible for any act or omission of any servant, agent, employee, or representative of such licensee in

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

violation of any statute, rule, or order pertaining to his license privileges.

- (c) Deliver to each person for whom he performs services requiring such license, prior to completion of services, a written notice which contains:

[(A) Name and address of his bonding company; and]

(A) [(B)] A list of rights of the recipient of such services which are contained in ORS[454.705(2) [.] ; and

(B) Name and address of the surety company which has executed the bond required by ORS 454.705(1); or

(C) A statement that the licensee has deposited cash or negotiable securities for the benefit of the Department in compensating any person injured by failure of the licensee to comply with ORS 454.605 to 454.745 and with OAR Chapter 340, Divisions 71 and 73.

- (d) Keep the Department informed on company changes that affect the license, such as, name change, change from individual to partnership, change from partnership to corporation, etc.

(6) [(5)] Misuse of License.

- (a) No licensee shall permit anyone to operate under his license, except a person who is working under supervision of the licensee.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(b) No person shall:

- (A) Display or cause or permit to be displayed, or have in his possession any license, knowing it to be fictitious, revoked, suspended or fraudulently altered.
- (B) Fail or refuse to surrender to the Department, upon demand, any license which has been suspended or revoked.
- (C) Give false or fictitious information or knowingly conceal a material fact or otherwise commit a fraud in any license application.

(7) [(6)] Personnel Responsibilities.

- (a) Persons performing the service of pumping or cleaning of sewage disposal facilities shall avoid spilling of sewage while pumping or while in transport for disposal.
- (b) Any accidental spillage of sewage shall be immediately cleaned up by the operator and the spill area shall be disinfected.

(8) [(7)] License Suspension or Revocation.

- (a) The Department may suspend, revoke, or refuse to grant, or refuse to renew, any sewage disposal service license if it finds:

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (A) A material misrepresentation or false statement in connection with a license application; or
 - (B) Failure to comply with any provisions of ORS 454.605 through 454.785, the rules of this Division, or an order of the Commission or Department; or
 - (C) Failure to maintain in effect at all times the required bond or other approved equivalent security, in the full amount specified in ORS 454.705; or
 - (D) Nonpayment by drawee of any instrument tendered by applicant as payment of license fee.
- (b) Whenever a license is revoked or expires, the operator shall remove the license from display and remove all Department identifying labels from equipment.
 - (c) A sewage disposal service may not be considered for re-licensure for a period of at least one (1) year after revocation of its license.

(9) [(8)] Equipment Minimum Specifications.

- (a) Tanks for pumping out of sewage disposal facilities shall comply with the following:

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (A) Have a liquid capacity of at least five hundred fifty (550) gallons.

Exception. Tanks for equipment used exclusively for pumping chemical toilets not exceeding fifty (50) gallons capacity, shall have a liquid capacity of at least one hundred fifty (150) gallons.

- (B) Be of watertight metal construction;
 - (C) Be fully enclosed;
 - (D) Have suitable covers to prevent spillage.
- (b) The vehicle shall be equipped with either a vacuum or other type pump which will not allow seepage from the diaphragm or other packing glands and which is self priming.
 - (c) The sewage hose on vehicles shall be drained, capped, and stored in a manner that will not create a public health hazard or nuisance.
 - (d) The discharge nozzle shall be:
 - (A) Provided with either a camlock quick coupling or threaded screw cap.
 - (B) Sealed by threaded cap or quick coupling when not in use.
 - (C) Located so that there is no flow or drip onto any portion of the vehicle.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (D) Protected from accidental damage or breakage.
- (e) No pumping equipment shall have spreader gates.
- (f) Each vehicle shall at all times be supplied with a pressurized wash water tank, disinfectant, and implements for cleanup.
- (g) Pumping equipment shall be used for pumping sewage disposal facilities exclusively unless otherwise authorized in writing by the Agent.
- (h) Chemical toilet cleaning equipment shall not be used for any other purpose.

(10) [(9)] Equipment Operation and Maintenance.

- (a) When in use, pumping equipment shall be operated in a manner so as not to create public health hazards or nuisances.
- (b) Equipment shall be maintained in a reasonably clean condition at all times.

(11) [(10)] Vehicles shall be identified as follows:

- (a) Display the name or assumed business name on each vehicle cab and on each side of a tank trailer:
 - (A) In letters at least three (3) inches in height; and
 - (B) In a color contrasting with the background.
- (b) Tank capacity shall be printed on both sides of the tank:
 - (A) In letters at least three (3) inches in height; and
 - (B) In a color contrasting with the background.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (c) Labels issued by the Department for each current license period shall be displayed at all times at the front, rear, and on each side of the "motor vehicle" as defined by United States Department of Transportation Regulations, Title 49 U.S.C.

(12) [(11)] Disposal of Pumpings.

Each licensee shall:

- (a) Discharge no part of the pumpings upon the surface of the ground unless approved by the Department in writing.
- (b) Dispose of pumpings only in disposal facilities approved by the Department.
- (c) Possess at all times during pumping, transport or disposal of pumpings, origin-destination records for sewage disposal services rendered.
- (d) Maintain on file complete origin-destination records for sewage disposal services rendered. Origin-Destination records shall include:
 - (A) Source of pumpings on each occurrence, including name and address.
 - (B) Specific type of material pumped on each occurrence.
 - (C) Quantity of material pumped on each occurrence.
 - (D) Name and location of authorized disposal site,

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

where pumpings were deposited on each occurrence.

(E) Quantity of material deposited on each occurrence.

(e) Transport pumpings in a manner that will not create a public health hazard or nuisance.

Amend OAR 340-73-025(5) as follows:

- (5) The inlet and outlet fittings shall be of cast iron, Schedule 40 P.V.C. plastic, Schedule 40 ABS plastic, or other materials approved by the Department, with a minimum diameter of four (4) inches:
- (a) The distance between the inlet and outlet fittings shall be equal to, or greater than, the liquid depth of the tank.
 - (b) The inlet and outlet fittings shall be located at opposite ends of the tank. They shall be attached in a water tight manner approved by the Department.
 - (c) The inlet fitting shall be a "sanitary tee" extending at least six (6) inches above and below the liquid level.
 - (d) The outlet fitting shall be a "tee" extending below liquid level a distance equal to not less than thirty-five (35) percent nor greater than fifty (50) percent

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

of the liquid depth, and at least six (6) inches above the liquid depth in order to provide scum storage.

When the tank is used as a holding tank, the outlet fitting shall be provided with a watertight plug.

- (e) Ventilation shall be provided through the fittings by means of a two (2) inch minimum space between the underside of the top of the tank and the top of the "tee" fitting.
- (f) The invert of the inlet fitting shall be not less than one (1) inch and preferably three (3) inches above the invert of the outlet fitting.
- (g) The septic tank manufacturer shall provide with each fitting a rubber or neoprene rubber gasket meeting ASTM Specification C-564, or an appropriate coupler which the Department determines will provide a water tight connection between the fittings and the building and effluent sewer pipes.
- (h) An access cover of not less than [eight (8)] six (6) inches across shall be provided above each fitting.

Amend OAR 340-73-035 (4) as follows:

- (4) Each distribution box shall be provided with a sump extending at least two (2) inches below the invert of the outlet s .

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

Amend OAR 340-73-050(3) as follows:

- (3) Each dosing tank[, except those] employing [siphons] one (1) or more pumps shall have a minimum liquid capacity equal to the projected daily sewage flow [or four hundred fifty (450) gallons, whichever is greater,] for [projected] flows up to twelve hundred (1200) gallons per day. The Department may use its discretion in sizing dosing tanks when the projected daily sewage flow is greater than twelve hundred (1200) gallons per day. The liquid capacity shall be as measured from the invert elevation of the inlet fitting.

Proposed Amendments to OAR 340-73-055

EFFLUENT PUMPS, CONTROLS & ALARMS, AND DOSING SIPHONS

OAR 340-73-055

- (1) Pumps, Controls, and Alarms: Electrical components used in on-site sewage disposal systems shall comply with State of Oregon Electrical Code, and the following provisions:
 - (a) Motors shall be continuous-duty, single-phase with [built-in automatic reset-] overload protection [on a separate starting winding.]
 - (b) Pumps shall have durable impellers of bronze, cast iron, or other materials approved by the Department.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(c) Submersible pumps shall be provided with an easy, readily accessible means of electrical and plumbing disconnect, and a noncorrosive lifting device as a means of removal for servicing.

(d) Except where specifically authorized in writing by the Director, the pump shall be placed within a corrosion-resistant screen that extends above the maximum effluent level within the pump chamber. The screen shall have at least twelve (12) square feet of surface area, with one-eighth (1/8) inch openings. The use of a screen is not required if the pump does not discharge into a pressurized distribution system, and the pump has a nonclog impeller capable of passing a 3/4 inch diameter solid sphere.

[(d) Pumps shall be capable of passing a three-quarter (3/4) inch solid sphere, and have a minimum one and one-quarter (1 1/4) inch discharge.]

[(e) Pumps shall be placed a minimum of six (6) inches above the dosing tank bottom.]

(e) [(f)] Pumps shall be automatically controlled by sealed mercury float switches with a minimum mercury tube rating of twelve (12) amps at one hundred fifteen (115) volts A.C. or by an approved equivalently reliable switching mechanism. The switches shall be installed so that approximately twenty (20) percent of the projected daily sewage flow is discharged each cycle.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

~~(f)~~ [(g)] An audible[.] and visual high water level alarm with manual silence switch shall be located in or near the building served by the pump. The audible alarm only may be user cancelable. Alarm and pump controls shall be on separate circuits. [If the alarm is located inside the building it shall be an audio-visual type of silence switch.] The [mercury float switch] switching mechanism controlling the high water level alarm shall be located so that at time of activation the dosing tank has at least one-third (1/3) of its capacity remaining for effluent storage.

[(h)] An electrical permit is required for all electrical connections and components.]

[(i)] When the projected sewage flow for the system exceeds twelve hundred (1200) gallons per day, or when the static lift is greater than one hundred (100) feet, the Department may exercise reasonable judgment in varying from the minimum pump requirements identified in this rule.]

(2) Dosing Siphons. Dosing siphons used in on-site sewage disposal systems shall comply with all of the following minimum requirements:

- (a) Shall be constructed of corrosion-resistant materials.
- (b) Shall be installed in accordance with the manufacturer's recommendations.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

Amend 340-73-060(1) as follows:

(1) EFFLUENT SEWER PIPE:

The effluent sewer shall be constructed with materials in conformance to building sewer standards, as identified in the Oregon State Plumbing Laws and Administrative Rules. The effluent sewer pipe shall have a minimum diameter of three (3) inches ~~and extend not less than five (5) feet beyond the septic tank. It shall be installed with a minimum fall of six (6) inches per one hundred (100) feet, but in no instance shall there be less than two (2) inches of fall from one end of the pipe to the other.]~~

Amend OAR 340-73-060(2) by adding a new Subsection (f) as follows:

Gravel-less subsurface disposal systems shall be constructed using corrugated polyethylene pipe meeting the requirements of ASTM F 667. The pipe shall have two rows of holes spaced approximately one hundred twenty (120) degrees apart, and approximately one hundred twenty (120) degrees apart each from the location stripe which shall be a contrasting color. The drain holes shall be a minimum of one-half (1/2) inch diameter. The minimum outlet area shall be one (1) square inch per lineal foot of pipe. There shall be at least one (1) drain hole present in the valley of each corrugation. The gravel-less subsurface disposal pipe shall be encased in a factory-installed spun-bonded nylon filter fabric meeting the following requirements:

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(a) Weight (ounce per square yard)

Per ASTM D 1910 - 0.85 ounces (nominal)

(b) Fiber Size, Denier per Filament (dpf)

4.7 (nominal value)

Corrugated polyethylene pipe shall be installed in twenty (20) foot sections or less and shall be connected with polyethylene fittings and couplings that comply with the requirements of ASTM F 667.

Amend OAR 340 Division 73 by adding a new rule 340-73-085 as follows:

340-73-085 FLEXIBLE MEMBRANE LINERS FOR SAND FILTERS

TREATING SEPTIC TANK EFFLUENT

(1) Unsupported polyvinyl chloride (PVC) shall have the following properties:

<u>Property</u>	<u>Test Method</u>
<u>(a) Thickness</u>	<u>ASTM D1593 30 mil, minimum</u>
	<u>Para 8.1.3</u>
<u>(b) Specific Gravity</u>	<u>ASTM D792</u>
<u>(minimum)</u>	<u>Method A</u>

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (c) Minimum Tensile Properties ASTM D882
(each direction)
(A) Breaking Factor Method A or B 69
(pounds/inch width) (1 inch wide)
(B) Elongation at Break Method A or B 300
(percent)
(C) Modulus (force) at Method A or B 27
100% Elongation
(pounds/inch width)
- (d) Tear Resistance (pounds, ASTM D1004 8
minimum) Die C
- (e) Low Temperature ASTM D1790 -20°F
- (f) Dimensional Stability ASTM D1204 ±5
(each direction, percent 212°F, 15 min.
change maximum)
- (g) Water Extraction ASTM D1239 -0.35% max.
- (h) Volatile Loss ASTM D1203 0.7% max.
Method A
- (i) Resistance to Soil Burial ASTM D3083
(percent change maximum
in original value)
(A) Breaking Factor -5
(B) Elongation at Break -20
(C) Modulus at 100% Elongation ±10

NOTE: Underlined _____ material is new.
 Bracketed [] material is deleted.

(j) Bonded Seam Strength ASTM D3083 55.2

(factory seam, breaking
factor, ppi width)

(k) Hydrostatic Resistance ASTM D751 82

Method A

(2) Installation Standards.

(a) Patches, repairs and seams shall have the same physical
properties as the parent material.

(b) Site considerations and preparation.

(A) The supporting surface slopes and foundation to accept the
liner shall be stable and structurally sound including
appropriate compaction. Particular attention shall be paid
to the potential of sink hole development and differential
settlement.

(B) Soil stabilizers such as cementations or chemical binding
agents shall not adversely affect the membrane; cementations
and chemical binding agents may be potentially abrasive
agents.

(c) Only fully buried membrane liner installation shall be considered
to avoid weathering.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(d) Unreinforced liners have high elongation and can conform to irregular surfaces and follow settlements within limits. Unreasonable strain reduces effective thickness and may reduce life expectancy by lessening the chemical resistance of the thinner (stretched) material. Every effort shall be made to minimize the strain (or elongation) anywhere in the flexible membrane liner.

(e) Construction of site:

(A) Surface condition.

(i) Preparation of earth subgrade. The prepared subgrade shall be of soil types no larger than Unified Soil Classification System (USCS) sand (SP) to a minimum of four (4) inches below the surface and free from loose earth, rock, fractured stone, debris, cobbles, rubbish and roots. The surface of the completed subgrade shall be properly compacted, smooth, uniform and free from sudden changes in grade. Importing suitable soil may be required.

(ii) Maintenance of subgrade. The earth subgrade shall be maintained in a smooth, uniform and compacted condition during installation of the lining.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(B) Climatic conditions.

(i) Temperature. The desirable temperature range for membrane installation is 42°F to 78°F. Lower or higher temperatures may have an adverse effect on transportation, storage, field handling and placement, seaming and backfilling and attaching boots and patches may be difficult. Placing liner outside the desirable temperature range shall be avoided.

(ii) Wind. Wind may have an adverse effect on liner installation such as interfering with liner placement. Mechanical damage may result. Cleanliness of areas for boot connection and patching may not be possible. Alignment of seams and cleanliness may not be possible. Placing the liner in high wind shall be avoided.

(iii) Precipitation. When field seaming is adversely affected by moisture, portable protective structures and/or other methods shall be used to maintain a dry sealing surface. Proper surface preparation for bonding boots and patches may not be possible. Seaming, patching and attaching 'boots' shall be done under dry conditions.

(C) Structures. Penetration of a flexible liner by any designed means shall be avoided. Where penetrations are necessary, such as horizontal and vertical pipes, it is essential to obtain a secure, liquid-tight seal between the pipes and the flexible liner. Liners shall be attached to pipes with a mechanical type seal supplemented by a chemically compatible caulking or adhesives to effect a liquid-tight seal. The

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

highest order of compaction shall be provided in the area adjacent to pipes to compensate for any settlement.

(D) Liner Placement.

(i) Size. The final cut size of the liner shall be carefully determined and ordered to generously fit the container geometry without field seaming or excess straining of the liner material.

(ii) Transportation, handling and storage. Transportation, handling and storage procedures shall be planned to prevent material damage. Material shall be stored in a secured area and protected from adverse weather.

(iii) Site inspection. A site inspection shall be carried out by the Agent and the installer prior to liner

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

installation to verify surface conditions, etc.

(iv) Deployment. Panels shall be positioned to minimize handling. Seaming should not be necessary. Bridging or stressed conditions shall be avoided with proper slack allowances for shrinkage. The liner shall be secured to prevent movement and promptly backfilled.

(v) Anchoring trenches. The liner edges should be secured frequently in a backfilled trench.

(vi) Field seaming. Field seaming, if absolutely necessary, shall only be attempted when weather conditions are favorable. The contact surfaces of the materials should be clean of dirt, dust, moisture, or other foreign materials. The contact surfaces shall be aligned with sufficient overlap and bonded in accordance with the suppliers recommended procedures. Wrinkles shall be smoothed out and seams should be inspected by nondestructive testing techniques to verify their integrity. As seaming occurs during installation, the field seams shall be inspected continuously and any faulty area repaired immediately.

(vii) Field repairs. It is important that traffic on the lined area be minimized. Any necessary repairs to the

NOTE: Underlined material is new.
Bracketed [] material is deleted.

liner shall be patched using the same lining material and following the recommended procedure of the supplier.

(viii) Final inspection and acceptance. As completed, the liner installation should be tested for functional integrity. All joints, seams and mechanical seals should be checked both during and after installation. Hydrostatic testing to evaluate watertightness of the completed liner installation before placement of any backfill may be required at the discretion of either the Agent or the owner/purchaser. The lined basin shall be filled to the four (4) foot level with water after the pipe inlets and outlets have been fitted with temporary plugs. Acceptance of workmanship shall be based upon a leakage rate of no more than 0.25 inches in a 24 hour period. Virtually no leakage should result from good workmanship, however.

(3) Operation and Maintenance Standards. The owner/purchaser of a sand filter system must recognize that he assumes the continuous responsibility to preserve the installation as near as practical in its "as built" state. This responsibility includes the control or

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

erosion of any "mound," the control and removal of large perennial plants, the fencing out of livestock and the control of burrowing animals.

NOTE: Underlined ~~material~~ material is new.
Bracketed [] material is deleted.

Amend OAR 340-71-140(2)(c), Appendix M, as follows:

340-71-140 (c)

APPENDIX M

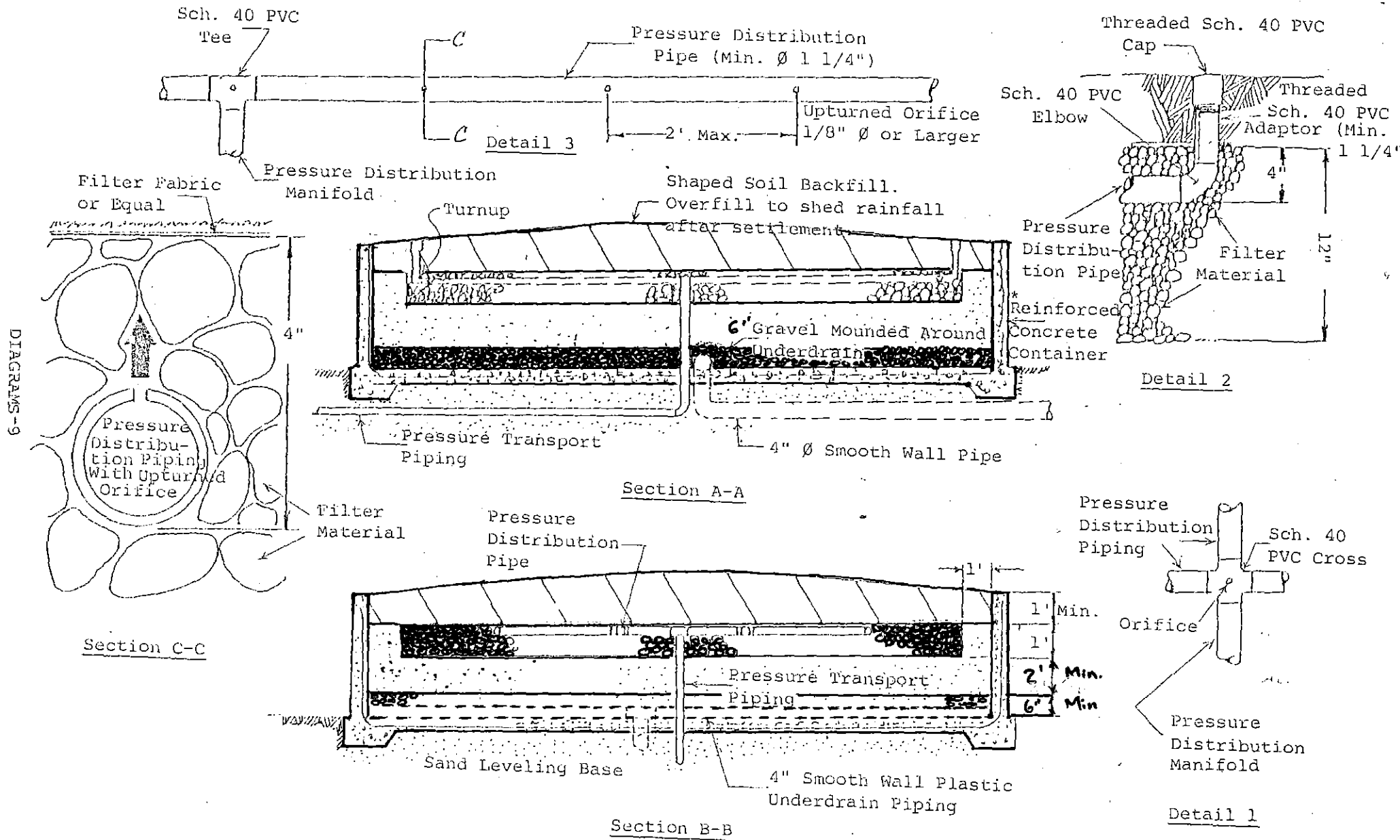
MULTNOMAH COUNTY FEE SCHEDULE

(1) Septic Tank and Disposal Field's	
(a) New site evaluation, 1st lot	\$120.00
(b) Each additional lot evaluation while on site	120.00
(2) Seepage Pits, Cesspools or Holding Tanks	
(New Site Evaluation)	
(a) Commercial site	120.00
(b) Industrial site	120.00
(c) Multiple residential site, 1st system	70.00
Each additional system	50.00
(d) Single family residential site	70.00
(3) Construction Installation Permit	
(a) Standard septic tank/drainfield, with daily flow of 450 gallons per day maximum	65.00
(b) Septic tank capping fill on disposal areas	75.00
(c) Sand filter system	100.00
(d) Septic tank/drainfield system in excess of 450 gallons per day Plus \$20.00 for each increment of 450 gal/day	65.00
<u>(e) Septic tank/drainfield lift pump system</u>	<u>85.00</u>
<u>(f) !(e)1</u> All alternative systems other than capping fill and sand filter systems	100.00
<u>(g) !(f)1</u> Cesspool	65.00

<u>(h)</u> [(g)]	Cesspool excess of 20' of rings	100.00
<u>(i)</u> [(h)]	Septic tank (maximum capacity 2500 gallons) and one 15' or 20' seepage pit	65.00
<u>(j)</u> [(i)]	Septic tank (maximum capacity 2500 gallons) and two 15' x 20' seepage pits	100.00
<u>(k)</u> [(j)]	System with septic tank larger than 3000 gallons shall be prorated at increments of \$50.00/1000 gal. capacity. \$50.00 for each increment of 1000 gallons of capacity	100.00
<u>(i)</u> [(k)]	Holding tank permits	100.00
<u>(4)</u>	<u>Replacement of Cesspool</u>	<u>65.00</u>
<u>(5)</u> [(4)]	Alteration of septic tank and drainfield	40.00
<u>(6)</u> [(5)]	Extension of septic tank and drainfield	40.00
<u>(7)</u> [(6)]	Repair of septic tank and drainfield	40.00
<u>(8)</u>	<u>Repair of Septic tank/drainfield with lift pump</u>	<u>55.00</u>
<u>(9)</u> [(7)]	Inspection of sewage disposal pump truck	25.00
	Each additional licensed truck on premises	10.00
<u>(10)</u> [(8)]	Evaluation of existing system adequacy	30.00
<u>(11)</u> [(9)]	Annual evaluation of alternative system (When required including holding tank)	40.00
<u>(12)</u> [(10)]	Annual evaluation of temporary mobile homes	25.00
<u>(13)</u> [(11)]	Abandonment of subsurface system	35.00

DIAGRAM 9

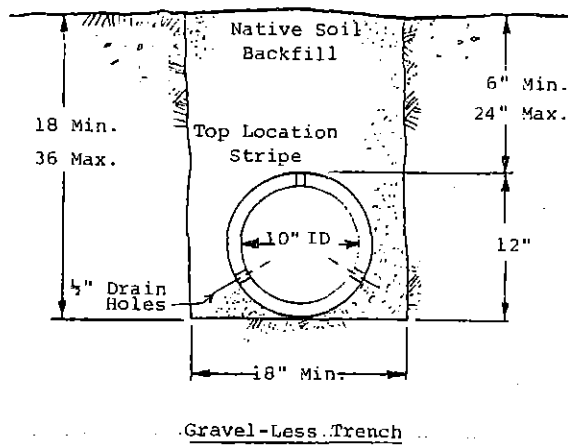
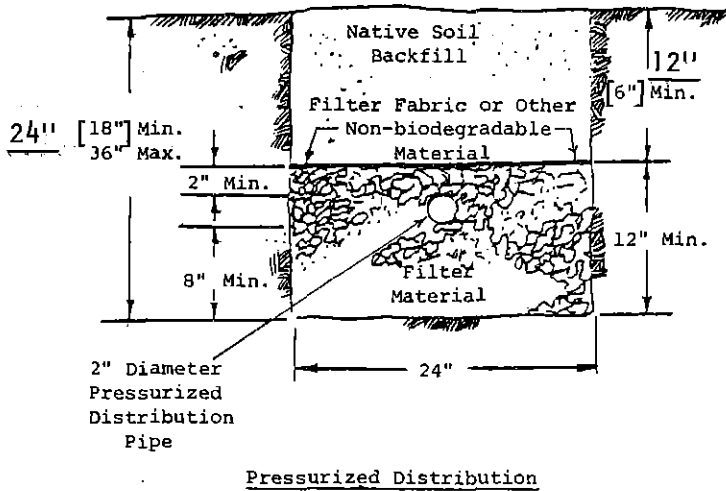
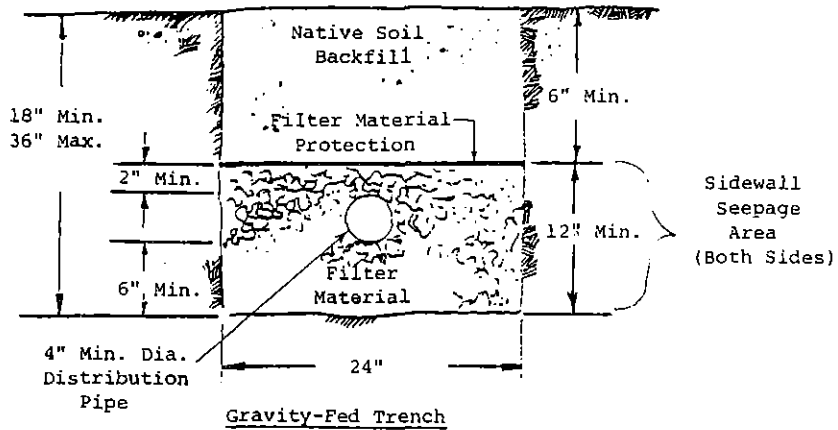
SAND FILTERS



Note: Not in scale

DIAGRAMS-9

DISPOSAL TRENCH CROSS SECTION

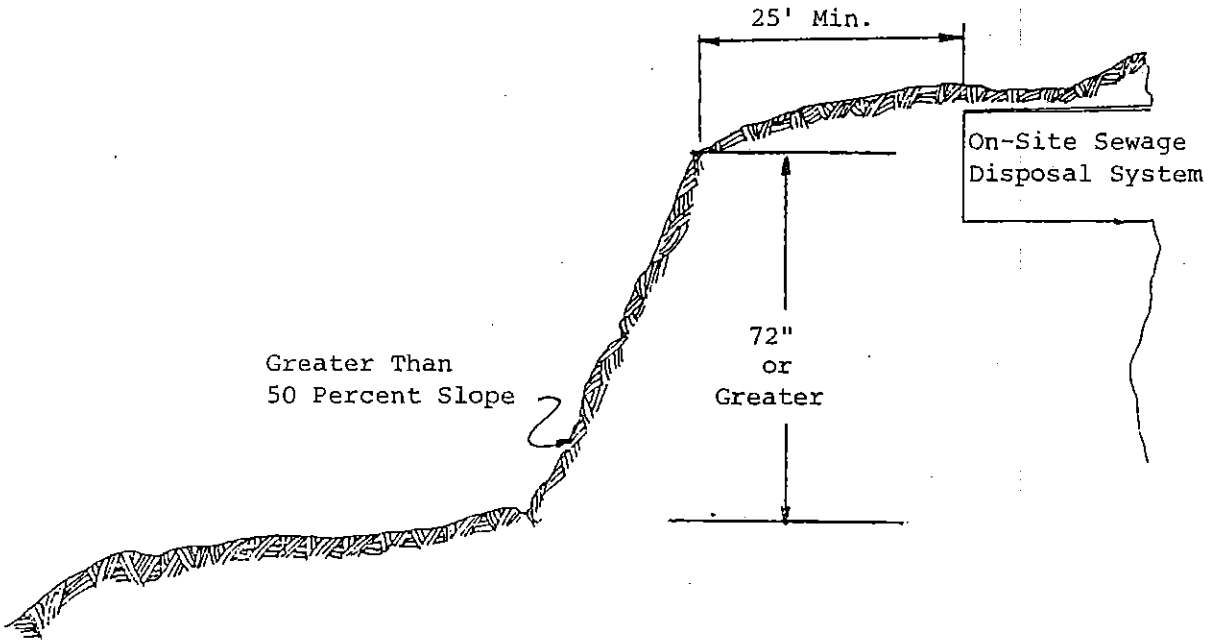


Bracketed [] material is deleted.

Underlined material is new.

Amend OAR 340-71 - Diagram 18 as follows:
DIAGRAM 18

IDEALIZED CROSS SECTION OF ESCARPMENT [OR MAN-MADE CUT]
(Without a Layer That Limits Effective Soil Depth)

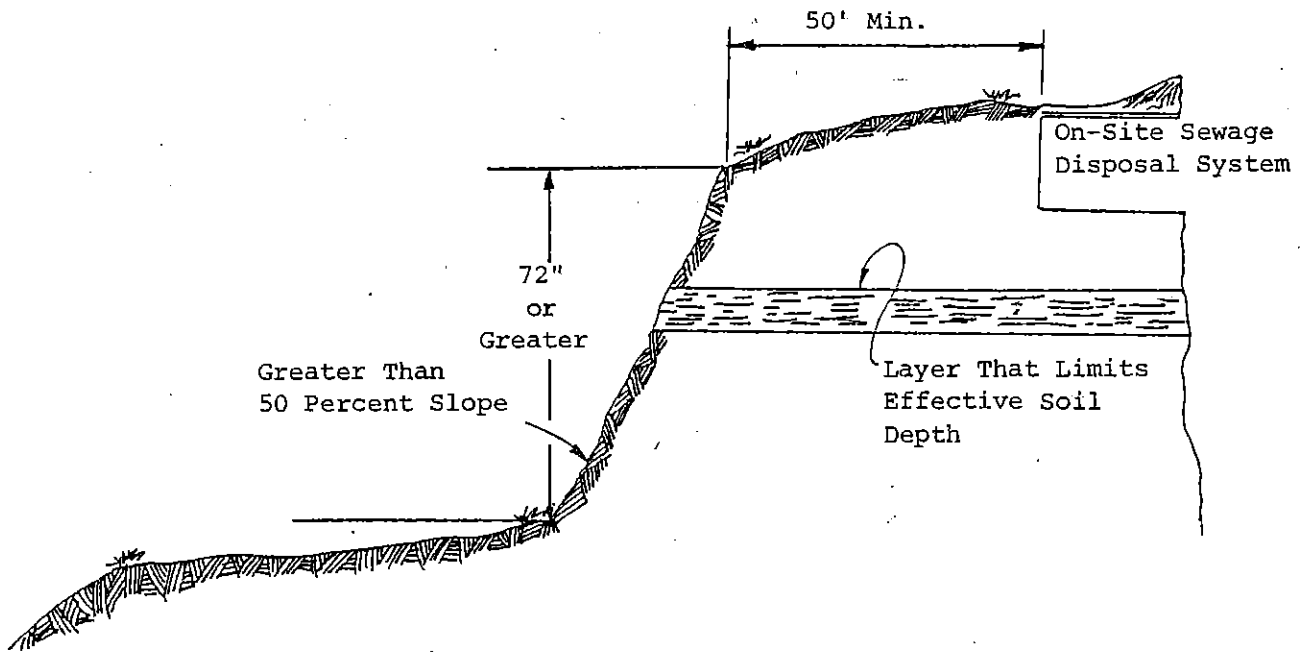


Bracketed [] material is deleted.

Amend OAR 340-71 - Diagram 19 as follows:

DIAGRAM 19

IDEALIZED CROSS SECTION OF ESCARPMENT [OR MAN-MADE CUT]
(With a Layer That Limits Effective Soil Depth)



Bracketed [] material is deleted.

Amend Diagram 1 as follows:

Diagram 1
(340-73-025(8))

TYPICAL CAST-IN-PLACE CONCRETE SEPTIC TANK SPECIFICATIONS

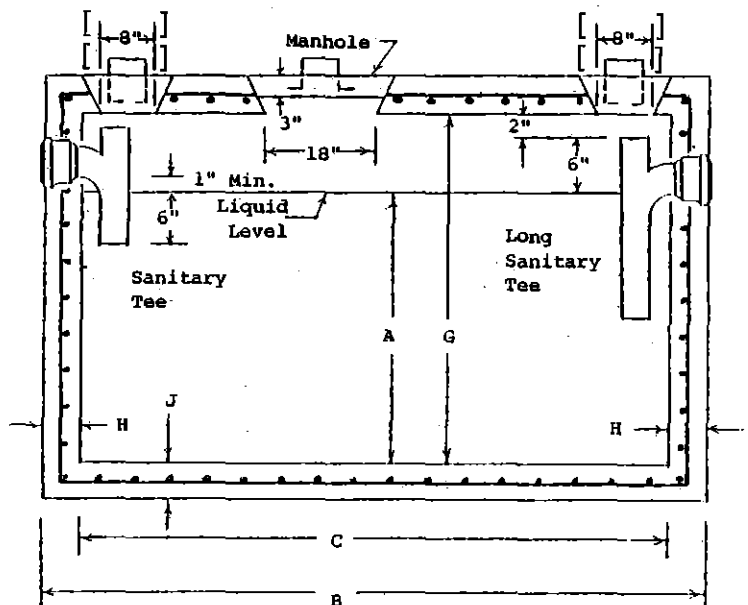
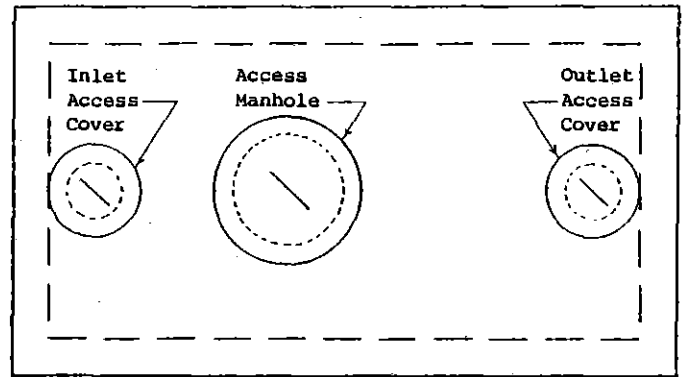
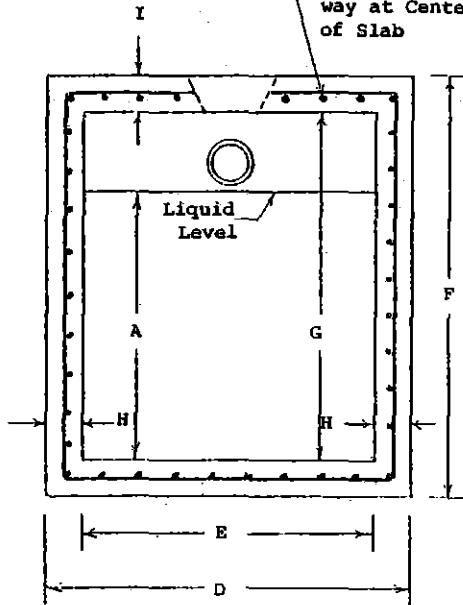
Working Capacity (gallons)		Working Capacity (cubic feet)	Liquid Depth	Tank Length		Tank Width		Tank Depth		Concrete Thickness		
Min. Required	Calculated			Outside	Inside	Outside	Inside	Outside	Inside	Side	Top	Bottom
			A	B	C	D	E	F	G	H	I	J
1000	1017	136	4'-3"	9'	8'	5'	4'	5'-11"	4'-11"	6"	6"	6"
1250	1256	168	4'-8"	9'	8'	5'-6"	4'-6"	6'-4"	5'-4"	6"	6"	6"
1500	1503	201	5'-7"	9'	8'	5'-6"	4'-6"	7'-3"	6'-3"	8"	6"	6"

Note:

- Mix shall be at least 5 1/2 sacks cement per cubic yard.
- Mix shall be vibrated or tamped to fill all voids.
- Work shall be continuously wet cured for seven days after placement.
- All reinforcing steel mats shall be centered in respective slabs and walls.
- Reinforcing steel shall be lapped 12 inches minimum at all corners and splices.
- Bar shall be cold-bent with not less than a 2 1/4 inch radius.

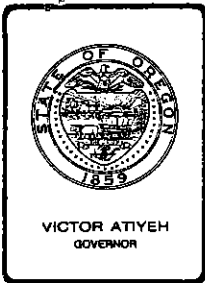
No. 3 Rebar at 8" O.C. each way at Center of Slab

Bracketed [] Material is deleted.



Supporting Documents

1. Agenda Item F, a Staff Report for the Environmental Quality Commission meeting on December 4, 1981.
2. Agenda Item U, a Staff Report for the Environmental Quality Commission meeting on August 28, 1981.
3. Agenda Item N, a Staff Report for the Environmental Quality Commission meeting on October 9, 1981.
4. Letter of December 16, 1981 to Sherman Olson (Department of Environmental Quality from Timothy J. Lang (Advanced Drainage Systems, Inc.)
5. Letter of November 9, 1981 to Sherman Olson (Department of Environmental Quality) from Robert L. Haskins (Assistant Attorney General).
6. Interoffice Memo of September 24, 1981 to Sherman Olson (Department of Environmental Quality) from Dick Nichols (Department of Environmental Quality).
7. Letter of August 27, 1981 to Sherman Olson (Department of Environmental Quality) from Gail Forsyth (Norwesco, Inc.).
8. Memorandum of June 15, 1981 to Environmental Quality Commission from Roy Burns (Lane County).
9. Letter of October 9, 1981 to Jack Osborne (Department of Environmental Quality) from M. W. Whitfield (Multnomah County).



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. F, December 4, 1981, EQC Meeting

Proposed Adoption of Temporary Rule Amending Rules for
On-Site Sewage Disposal, OAR 340-71-600

Background and Problem Statement

Prior to June 1, 1981, each applicant for a sewage disposal service license has been required by ORS 454.695 and ORS 454.705 to obtain and provide a bond, executed in favor of the State of Oregon, when making application for license. On occasion an applicant has proposed to provide other forms of security in lieu of a surety bond, but because of the specific statutory language it has not been acceptable to the Department.

Chapter 148, Oregon Laws 1981, revised the statutes to allow the deposit of cash or other negotiable securities in lieu of the surety bond. The bill contained an emergency clause, causing it to take effect upon passage, June 1, 1981.

Administrative rules governing sewage disposal service licensing (OAR 340-71-600) need to be amended to implement the flexibility now allowed by statute.

Alternatives and Evaluation

1. Leave administrative rules as they are and implement the provisions of the statutes directly.
2. Adopt amendments to the rules, using permanent rulemaking procedures.
3. Adopt a temporary rule which would go into effect immediately. The proposed amendments to OAR 340-71-600 are contained within Attachment "B".

After an evaluation of alternatives, staff is of the opinion that the third is the best alternative. It has the advantage of being effective immediately, whereas the second alternative does not. It also allows the Department to spell out the criteria necessary for smooth implementation, including the methods by which claims may be resolved.

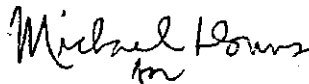
Summation and Findings

1. Chapter 148, Oregon Laws 1981, provides for the deposit of cash or other negotiable securities in lieu of a surety bond when application is made for a sewage disposal service license. The administrative rules have not been amended to implement this provision.
2. Adoption of a temporary rule to become effective immediately is the alternative of choice.
3. The Environmental Quality Commission of the State of Oregon finds that its failure to act promptly, by adopting a temporary rule, amending OAR 340-71-600, will result in serious prejudice to the public interest or the interest of the parties concerned, for the following reason:

Chapter 148, Oregon Laws 1981, provides for the deposits of cash or other negotiable securities in lieu of a surety bond when application is made for a sewage disposal service license. Implementation of this provision has not been incorporated into Administrative Rules.

Director's Recommendation

Based upon the summation and the findings, it is recommended that the Commission adopt the proposed temporary rule amending OAR 340-71-600, as set forth in Attachment "B", and instruct staff to include such an amendment in the permanent rule procedures of public hearing, etc. contemplated in the January 1982 rule amendment package.


for
William H. Young

Attachments 3

1. Attachment "A" Statement of Need for Rulemaking and Fiscal Impact Statement
2. Attachment "B" Proposed Temporary Rule Amending OAR 340-71-600

Sherman O. Olson, Jr.:g
229-6443
November 12, 1981

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of the Adoption of) Statutory Authority,
Temporary Rule Amending) Statement of Need,
OAR 340-71-600) Principal Documents Relied Upon
) and Statement of Fiscal Impact

1. Citation of Statutory Authority:

ORS 454.625, which requires the Environmental Quality Commission to adopt such rules as it considers necessary for the purpose of carrying out OAR 454.605 to 454.745.

2. Need for the Rule:

Chapter 148, Oregon Laws 1981 (effective June 1, 1981), allows a sewage disposal service license applicant to deposit, in lieu of a surety bond, the equivalent value in cash or negotiable securities. The administrative rules have not been amended to implement this provision.

3. Principal Documents Relied Upon:

Chapter 148, Oregon Laws 1981.

4. Fiscal and Economic Impacts:

Fiscal and economic impacts fall upon the Department and individual sewage disposal service license applicants. The license applicants will save the cost of securing a bond, and will accrue the interest earned by the deposit. The Department will incur expenses in the processing and safeguarding of these alternative securities.

William H. Young, Director
Department of Environmental Quality

Sherman O. Olson, Jr.:g
229-6443
December 4, 1981

XG669 (1)

Proposed Amendments to OAR 340-71-600

340-71-600 SEWAGE DISPOSAL SERVICE.

- (1) For the purpose of these rules "Sewage Disposal Service" means:
- (a) The installation of on-site sewage disposal systems, or any part thereof; or
 - (b) The pumping out or cleaning of on-site sewage disposal systems, or any part thereof; or
 - (c) The disposal of material derived from the pumping out or cleaning of on-site sewage disposal systems; or
 - (d) Grading, excavating, and earth-moving work connected with the operations described in subsection (1) of this rule, except streets, highways, dams, airports or other heavy construction projects and except earth-moving work performed under the supervision of a builder or contractor in connection with and at the time of the construction of a building or structure; or
 - (e) The construction of drain and sewage lines from five (5) feet outside a building or structure to the service lateral at the curb or in the street or alley or other disposal terminal holding human or domestic sewage.
- (2) No person shall perform sewage disposal services or advertise or represent himself/herself as being in the business of performing such services without first obtaining a license from the Department. Licenses are not transferable.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(3) Those persons making application for a sewage disposal service license shall:

- (a) Complete an application form supplied by the Department;
and
- (b) [Execute a surety bond in the penal sum of two thousand five hundred (\$2500) dollars in favor of the State of Oregon, on forms supplied by the Department. Bonds shall be written to coincide with the licensing period; and]
File and maintain with the Department original evidence of surety bond, or other approved equivalent security, in the penal sum of two thousand five hundred dollars (\$2,500);
and
- (c) Shall have pumping equipment inspected by the Agent annually if intending to pump out or clean systems and shall complete the "Sewage Pumping Equipment Description/Inspection" form supplied by the Department. An inspection performed after January 1st shall be accepted for licensing the following July 1st; and
- (d) Provide evidence of registration of business name with State Department of Commerce.
- (e) Submit the appropriate fee as set forth in Subsection 340-71-140(1)(k).

(4) The type of security to be furnished pursuant to OAR

340-71-600(3)(b) may be:

- (a) Surety bond executed in favor of the State of Oregon on a form approved by the Attorney General and provided by the Department. The bond shall be issued by a surety company

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

licensed by the Insurance Commissioner of Oregon. Any surety bond shall be so conditioned that it may be cancelled only after thirty (30) days notice to the Department, and to otherwise remain in effect for not less than two (2) years following termination of the sewage disposal service license, except as provided in subsection (e) of this section; or

(b) Insured savings account irrevocably assigned to the Department, with interest earned by such account made payable to the depositor; or

(c) Negotiable securities of a character approved by the State Treasurer, irrevocably assigned to the Department, with interest earned on deposited securities made payable to the depositor.

(d) Any deposit of cash or negotiable securities under ORS 454.705 shall remain in effect for not less than two (2) years following termination of the sewage disposal service license except as provided in subsection (e) of this section. A claim against such security deposits must be submitted in writing to the Department, together with an authenticated copy of:

(A) The court judgment or order requiring payment of the claim; or

(B) Written authority by the depositor for the Department to pay the claim.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(e) When proceedings under ORS 454.705 have been commenced while the security required is in effect, such security shall be held until final disposition of the proceedings is made. At that time claims will be referred for consideration of payment from the security so held.

(5) [(4)] Each licensee shall:

(a) Be responsible for any violation of any statute, rule, or order of the Commission or Department pertaining to his licensed business.

(b) Be responsible for any act or omission of any servant, agent, employee, or representative of such licensee in violation of any statute, rule, or order pertaining to his license privileges.

(c) Deliver to each person for whom he performs services requiring such license, prior to completion of services, a written notice which contains:

[(A) Name and address of his bonding company; and]

(A) [(B)] A list of rights of the recipient of such services which are contained in ORS 454.705(2) [.] ; and

(B) Name and address of the surety company which has executed the bond required by ORS 454.705(1); or

(C) A statement that the licensee has deposited cash or negotiable securities for the benefit of the Department in compensating any person injured by failure of the licensee to comply with ORS 454.605 to 454.745 and with OAR Chapter 340, Divisions 71 and 73.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (d) Keep the Department informed on company changes that affect the license, such as, name change, change from individual to partnership, change from partnership to corporation, etc.

(6) [(5)] Misuse of License.

- (a) No licensee shall permit anyone to operate under his license, except a person who is working under supervision of the licensee.
- (b) No person shall:
 - (A) Display or cause or permit to be displayed, or have in his possession any license, knowing it to be fictitious, revoked, suspended or fraudulently altered.
 - (B) Fail or refuse to surrender to the Department, upon demand, any license which has been suspended or revoked.
 - (C) Give false or fictitious information or knowingly conceal a material fact or otherwise commit a fraud in any license application.

(7) [(6)] Personnel Responsibilities.

- (a) Persons performing the service of pumping or cleaning of sewage disposal facilities shall avoid spilling of sewage while pumping or while in transport for disposal.
- (b) Any accidental spillage of sewage shall be immediately cleaned up by the operator and the spill area shall be disinfected.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(8) [(7)] License Suspension or Revocation.

- (a) The Department may suspend, revoke, or refuse to grant, or refuse to renew, any sewage disposal service license if it finds:
- (A) A material misrepresentation or false statement in connection with a license application; or
 - (B) Failure to comply with any provisions of ORS 454.605 through 454.785, the rules of this Division, or an order of the Commission or Department; or
 - (C) Failure to maintain in effect at all times the required bond in the full amount specified in ORS 454.705; or
 - (D) Nonpayment by drawee of any instrument tendered by applicant as payment of license fee.
- (b) Whenever a license is revoked or expires, the operator shall remove the license from display and remove all Department identifying labels from equipment.
- (c) A sewage disposal service may not be considered for re-licensure for a period of at least one (1) year after revocation of its license.

(9) [(8)] Equipment Minimum Specifications.

- (a) Tanks for pumping out of sewage disposal facilities shall comply with the following:

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (A) Have a liquid capacity of at least five hundred fifty (550) gallons.

Exception. Tanks for equipment used exclusively for pumping chemical toilets not exceeding fifty (50) gallons capacity, shall have a liquid capacity of at least one hundred fifty (150) gallons.

- (B) Be of watertight metal construction;
 - (C) Be fully enclosed;
 - (D) Have suitable covers to prevent spillage.
- (b) The vehicle shall be equipped with either a vacuum or other type pump which will not allow seepage from the diaphragm or other packing glands and which is self priming.
 - (c) The sewage hose on vehicles shall be drained, capped, and stored in a manner that will not create a public health hazard or nuisance.
 - (d) The discharge nozzle shall be:
 - (A) Provided with either a camlock quick coupling or threaded screw cap.
 - (B) Sealed by threaded cap or quick coupling when not in use.
 - (C) Located so that there is no flow or drip onto any portion of the vehicle.
 - (D) Protected from accidental damage or breakage.
 - (e) No pumping equipment shall have spreader gates.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

- (f) Each vehicle shall at all times be supplied with a pressurized wash water tank, disinfectant, and implements for cleanup.
- (g) Pumping equipment shall be used for pumping sewage disposal facilities exclusively unless otherwise authorized in writing by the Agent.
- (h) Chemical toilet cleaning equipment shall not be used for any other purpose.

(10) [(9)] Equipment Operation and Maintenance.

- (a) When in use, pumping equipment shall be operated in a manner so as not to create public health hazards or nuisances.
- (b) Equipment shall be maintained in a reasonably clean condition at all times.

(11) [(10)] Vehicles shall be identified as follows:

- (a) Display the name or assumed business name on each vehicle cab and on each side of a tank trailer:
 - (A) In letters at least three (3) inches in height; and
 - (B) In a color contrasting with the background.
- (b) Tank capacity shall be printed on both sides of the tank:
 - (A) In letters at least three (3) inches in height; and
 - (B) In a color contrasting with the background.
- (c) Labels issued by the Department for each current license period shall be displayed at all times at the front, rear, and on each side of the "motor vehicle" as defined by United States Department of Transportation Regulations, Title 49 U.S.C.

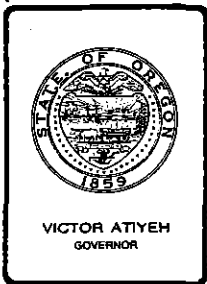
NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.

(12) [(11)] Disposal of Pumpings.

Each licensee shall:

- (a) Discharge no part of the pumpings upon the surface of the ground unless approved by the Department in writing.
- (b) Dispose of pumpings only in disposal facilities approved by the Department.
- (c) Possess at all times during pumping, transport or disposal of pumpings, origin-destination records for sewage disposal services rendered.
- (d) Maintain on file complete origin-destination records for sewage disposal services rendered. Origin-Destination records shall include:
 - (A) Source of pumpings on each occurrence, including name and address.
 - (B) Specific type of material pumped on each occurrence.
 - (C) Quantity of material pumped on each occurrence.
 - (D) Name and location of authorized disposal site, where pumpings were deposited on each occurrence.
 - (E) Quantity of material deposited on each occurrence.
- (e) Transport pumpings in a manner that will not create a public health hazard or nuisance.

NOTE: Underlined _____ material is new.
Bracketed [] material is deleted.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. U , August 28, 1981, EQC Meeting

Proposed Adoption of Temporary Rule Amending Rules
for On-Site Sewage Disposal, OAR 340-73-055

Background and Problem Statement

At its March 13, 1981 meeting the Commission adopted a comprehensive set of Administrative Rules for On-site Sewage Disposal. OAR 340-73-055 sets standards for effluent pumps, controls, alarms, and dosing siphons. Certain of the standards affect electrical components on pumps, alarms and controls. It has recently come to the Department's attention that these standards conflict with the explosion-proof requirements of the State of Oregon electrical code. The electrical code requires electrical equipment installed in a potentially explosive atmosphere to be "intrinsically safe." Methane gas within pumping chambers is potentially explosive. The electrical equipment required in Appendix E does not meet the "intrinsically safe" requirement. Conversely, equipment that is intrinsically safe is prohibited by this rule. At this time any pumps, alarms or controls installed will be in violation of either the Department's rules or the State Electrical Code.

Alternatives and Evaluation

Several of the new alternative systems depend upon the use of pumps, alarms and controls. In addition, the number of alternative systems being approved is increasing rapidly. As a result of rule conflicts, we are at a standstill in approval of systems with electrical components. The State Fire Marshall will not approve changes to the State Electrical Code; therefore, it is necessary that the Department propose amendments to OAR 340-73-055 to alleviate the situation. Reliable equipment for use in sewage disposal systems and which meet electrical code requirements is available, however costs will be greater. Department rules need to be amended to allow its use.

✓

Summation

1. The Commission adopted OAR 340-73-055, which sets standards for pumps, alarms and controls.
2. Some of the requirements of Appendix E conflict with the State Electrical Code for explosive atmospheres.
3. The conflict between the Department's rules, OAR 340-73-055 and the State Electrical Code, can be resolved by adoption of a temporary rule.

Findings

The Environmental Quality Commission finds that failure to act promptly will result in serious prejudice to the public interest or the interest of the parties concerned, in that on-site sewage disposal systems utilizing electrical components cannot be approved without being in conflict with the State Electrical Code.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the Commission adopt the proposed temporary rule amending OAR 340-73-055 as set forth in Attachment C.

Bill

William H. Young

Attachments: 5

- | | |
|----------------|--|
| Attachment A-1 | Memo of April 2, 1981, to Walt Keyes, Chief Electrical Inspector, from Pat Franzen, Chief Deputy |
| Attachment A-2 | Letter of June 10, 1981, from Orenco Systems, Inc. to Walt Keyes, Chief Electrical Inspector |
| Attachment A-3 | Letter of July 10, 1981, from Orenco Systems, Inc. to Sherman Olson of the Department of Environmental Quality |
| Attachment B | Statement of Need for Rulemaking |
| Attachment C | Proposed Temporary Rule |

T. Jack Osborne:1
XL457 (1)
229-6018
August 12, 1981



OFFICE OF STATE FIRE MARSHAL

TO: Walt Keyes
Chief Electrical Inspector

DATE: April 2, 1981

FROM: Pat Franzen *P. J. Franzen*
Chief Deputy

SUBJECT: Electrical equipment in Sewage Lift Stations

With the continued confusion regarding the electrical wiring methods to be incorporated in sewage lift stations, the following facts seem pertinent to note:

1. Areas where the sewage is not atmospherically separated from the electrical equipment, the wiring methods and equipment must be as specified for Class I Division I.
2. Pump and motor installations which insure the motor is submersed at all times may be installed as follows.
 1. Provide only intrically safe relays.
 2. Provide a redundant shut off.
 3. Controller must be outside the sewage atmosphere. If junction box provided in atmosphere, it must be Class I Division I.
 4. Flexible cord may be as specified in N.E.C., 501-11.

PHF:pk

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

R
JUL 14 1981

WATER QUALITY CONTROL

ORENCO SYSTEMS Inc.

1205 S.E. Court Avenue
 Roseburg, Oregon 97470
 503 673-0165

June 10, 1981

State of Oregon
 DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
 JUN 12 1981

Mr. Walt Keyes
 Chief Electrical Inspector
 Mr. Carl Koenig
 Assistant Chief
 Building Codes Division
 401 Labor & Industries Building
 Salem, OR 97310

WATER QUALITY CONTROL

Re: Electrical equipment in Sewage Lift Stations

Gentlemen:

Thank you for meeting with me last Friday, June 5. I very much appreciate your cooperation.

As you know, I was surprised at the application of the ruling made for Sewage Lift Stations, as contained in the memo to you from the State Fire Marshal, dated April 2, 1981. As Class 1 Division 1 locations, electrical equipment would have to be explosion proof as defined in NEC 100-A, or may be intrinsically safe, NEC 500-1.

This ruling substantially impacts all companies supplying equipment for pressure sewer or pressurized on-site sewage disposal systems, including Orenco. To better acquaint you with pressure sewers, an article is enclosed: "Pressure Sewer System Proves Effective, Economical", reprinted from the March issue of Public Works magazine. With either a pressure sewer or pressurized on-site sewage disposal, a sump pump is used to pump septic tank effluent. Is this to be construed as a "Sewage Lift Station", thereby to be included under the April 2 memo? I know of only two sources of intrinsically safe relays: DeLaval (Gems) and B/W. Information on these two products is enclosed.

The Gems Device is UL listed. It is CSA and FM approved. The list price is about \$90, and 2 are required, for a materials price of \$180. They would be installed in an enclosure mounted on the outside wall of the home. They are rated for an ambient temperature range of from 0° to 120° F. We have measured temperatures within typical electrical enclosures, and they substantially exceed 120°

ORENCO SYSTEMS Inc.

sometimes even ranging over 150°. In some Oregon climates, temperatures well below 0° would be expected.

The B/W intrinsically safe relay is FM approved. The list price is \$200, and two are required, for a total materials price of \$400. This unit cannot be used in UL assembly without adding an isolation transformer and ground fault interrupter.

The typical price for a septic tank effluent pump controller and level control system presently might range from \$75 to \$250. It appears that intrinsically safe provisions will more than double the cost, and the unit may be more maintenance intense.

Department of Environmental Quality (DEQ) regulations enclosed require that level controls be mercury switch with a mercury tube rating of 12 amps at 115 VAC. These regulations are not in compliance with the April 2 memo if septic tank effluent pumps are included in the definition.

Article 2.4. of the April 2 memo states that flexible cord may be as specified in NEC 501-11. The pumps used are supplied with SJO cable, rated for hard usage (NEC table 400-4). NEC 501-11 would require type SO cable, rated for extra hard usage. The pump manufactures will not allow us to change the cord without invalidating the pump warranty. Mercury switches that we use have SJTO cord. I know of none available with SO cord.

We now have a number of pumps in stock with SJO cable, and more on order. Materials are presently on order to build 100 UL listed but not intrinsically safe control panels, and many of the materials have been received. You can easily see how Orenco is affected. I would expect other suppliers to be affected to the same degree or worse.

The memo of April 2 refers to Sewage Lift Stations. I can accept the memo as it relates to conventional, municipal Sewage Lift Stations. Explosions can and do occur in these occasionally, due to the seep of spill of gasoline or other explosive substances into the gravity sewer, from industrial and sometimes commercial sources. Sewer gases such as methane and hydrogen sulfide can be explosive in certain concentrations and when combined with certain oxygen ratios, but this very rarely if ever occurs.

The risk of explosion is much less in septic tank - effluent pump vault than in a conventional, municipal Sewage Lift Station. No gravity collection sewer is used, to receive seepage of flammable substances. Pressure sewers and on-site systems usually serve homes, not industry. The

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
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WATER QUALITY CONTROL

ORENCO SYSTEMS Inc.

NEC specifically allows consideration of the "record of the industry" with respect to explosions in determining the classification of location (NEC 500-4-b footnote). Accordingly, many agencies have exempted pressure sewer equipment from the Class 1 Division 1 requirements applying to Sewage Lift Stations (reference Mr. J. F. Kreissl, U.S. EPA, Cincinnati, OH 513-684-7614). It is important also to note that the additional cost is insignificant when considering a Sewage Lift Station costing from \$20,000 to \$200,000, but it is not trivial to a septic tank effluent pump installation costing about \$2,500.

We intend to comply with your requirements. We favor relaxing the rule with regard to Septic tank effluent pumps, but more than anything else, we need a ruling: ARE SEPTIC TANK - EFFLUENT PUMP LOCATIONS REGARDED AS "SEWAGE LIFT STATIONS" PER MEMO OF APRIL 2, 1981? If so, a DEQ rule change will be necessary. And, we will hope that this can be made known, so others will not unknowingly market the non complying equipment.

Thank you for your time and consideration of our concerns. Should you wish to discuss this matter, I would be pleased to meet with you at nearly any time. We will hope for a prompt reply, as materials now on order are placed on hold.

Very truly,



W. C. Bowne, P. E.

WCB ts

Enclosures

cc: Mr. Bill Young, Director, Department of Environmental Quality
Mr. Cliff Morrison, Advanced Control Technology
Mr. Walt Warner, Warner Engineering
Mr. Jim VanDomelen, Department of Environmental Quality
Mr. Sherman Olson, Department of Environmental Quality
Office of State Fire Marshal

ORENCO SYSTEMS Inc.

1205 S.E. Court Avenue
 Roseburg, Oregon 97470
 503 673-0165

July 10, 1981

Mr. Sherman Olsen
 Department of Environmental Quality
 P.O. Box 1760
 Portland, OR 97207

Dear Sherman:

You will recall our recent conversations and that the State Fire Marshal has interpreted the code that sewage wet wells are a Class 1 Division 1 hazardous atmosphere (NEC Article 500). The State Electrical Inspector has buttressed this opinion, and by phone extended that interpretation to apply to the pumping of septic tank effluent at residences. A copy of the Fire Marshal memo is attached.

The electrical control panel we were building was to retail at \$250. The addition of intrinsically safe relays will add \$375 to the price. Additionally, the panel will be less reliable. If the resistance between terminals on the ISR falls to below 100,000 ohms, the ISR will trip. This happens due to condensation, or even fog. The ISR is rated for an ambient air temperature of 0°F to 120°F. The panels may be as hot as 160°F (or hotter), when in the direct sun. Temperatures colder than 0°F can be expected in Oregon. Intrinsically safe wiring should be twisted to avoid picking up "noise". And, it must be run in a separate conduit.

My personal view of a septic tank atmosphere is that it should not be classified as hazardous. The US EPA shares in this opinion. They regard sewage wet wells as Class 1 Division 1, but exempt individual home units. For further information, you may contact Mr. Jim Kreissl, Cincinatti, (513) 684-7614 or Mr. Jim Wheeler, Washington D.C. (202) 426-8976.

The On-Site Sewage Disposal Rules, DEQ March 13, 1981, contain requirements contrary to the State Electrical Inspectors position. In appendix E, part C, and appendix B II, part D 2, an easy means of electrical disconnect is required. I know of no practical way to accomplish this and also comply with Class 1 Division 1 requirements. The typical means would be to route the wiring through a sealed conduit to a pull box located outside the atmosphere, where a water tight, underground splice is made. In appendix E, part F, the mercury switch substituting

State of Oregon
 DEPARTMENT OF ENVIRONMENTAL QUALITY
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ORENCO SYSTEMS Inc.

be 12 amps at 115 volts AC. This is in contradiction to hazardous location practice.

I urge you to discuss the matter with the State Electrical Inspector and State Fire Marshal. Hopefully, the interpretation that effluent pump wells at individual residences is hazardous can be revised to coincide with more common national practice (EPA). If this attempt is not successful, the DEQ rules will have to be changed. What will be done in the interim, in order to supply pumping equipment to meet both your requirements and theirs?

Once the matter is resolved, it is important that the rules be known state wide.

Please feel free to contact me if I can be of any assistance.

Very truly,



W. C. Bowne, P. E.

WCB ts

Enclosures

CC: State Fire Marshal
State Electrical Inspector
DEQ - Mark Ronayne
DEQ - Jim VanDomelen

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of the Adoption of Temporary Rule Amending OAR 340-73-055) Statutory Authority,) Statement of Need,) Principal Documents Relied Upon) and Statement of Fiscal Impact
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1. Citation of Statutory Authority:

ORS 454.625, which requires the Environmental Quality Commission to adopt such rules as it considers necessary for the purpose of carrying out OAR 454.605 to 454.745.

2. Need for the Rule:

Some of the requirements of OAR 340-73-055 conflict with the State Electrical Code for Explosive Atmospheres. At this time on-site sewage disposal systems utilizing electrical components cannot be approved legally. A temporary rule is necessary to alleviate the situation.

3. Documents Relied Upon in Proposing the Rule:

- a. Memo of April 2, 1981, to Walt Keyes, Chief electrical Inspector, from Pat Franzen, Chief Deputy
- b. Letter of June 10, 1981, from Orenco Systems, Inc. to Walt Keyes, Chief Electrical Inspector
- c. Letter of July 10, 1981, from Orenco Systems, Inc. to Sherman Olson of the Department of Environmental Quality

The above documents are available for public inspection at the office of the Department of Environmental Quality, 522 S.W. Fifth, Portland, during regular business hours, 8 a.m. to 5 p.m., Monday through Friday.

4. Fiscal and Economic Impacts:

Fiscal and economic impacts fall upon individual applicants for alternative systems which utilize electrical components. These individuals cannot use their systems until approved by the electrical inspector.

Date: August 12, 1981

William H. Young, Director
Department of Environmental Quality

XL457.A (1)

ATTACHMENT C

Proposed Amendments to OAR 340-73-055

EFFLUENT PUMPS, CONTROLS & ALARMS, AND DOSING SIPHONS

OAR 340-73-055

- (1) Pumps, Controls, and Alarms: Electrical components used in on-site sewage disposal systems shall comply with State of Oregon Electrical Code, and the following provisions:
 - (a) Motors shall be continuous-duty, single-phase with [built-in automatic reset-]overload protection. [on a separate starting winding.]
 - (b) Pumps shall have durable impellers of bronze, cast iron, or other materials approved by the Department.
 - (c) Submersible pumps shall be provided with an easy, readily accessible means of electrical and plumbing disconnect, and a noncorrosive lifting device as a means of removal for servicing.
 - (d) Except where specifically authorized in writing by the Director, the pump shall be placed within a corrosion-resistant screen that extends above the maximum effluent level within the pump chamber. The screen shall have at least twelve (12) square feet of surface area, with one-eighth (1/8) inch openings.

[(d) Pumps shall be capable of passing a three-quarter (3/4) inch solid sphere, and have a minimum one and one-quarter (1 1/4) inch discharge.]

[(e) Pumps shall be placed a minimum of six (6) inches above the dosing tank bottom.]

(e) [(f)] Pumps shall be automatically controlled by sealed mercury float switches with a minimum mercury tube rating of twelve (12) amps at one hundred fifteen (115) volts A.C. or by an approved equivalently reliable switching mechanism. The switches shall be installed so that approximately twenty (20) percent of the projected daily sewage flow is discharged each cycle.

(f) [(g)] An audible[.] and visual high water level alarm with manual silence switch shall be located in or near the building served by the pump. The audible alarm only may be user cancelable. Alarm and pump controls shall be on separate circuits. [If the alarm is located inside the building it shall be an audio-visual type of silence switch.] The [mercury float switch] switching mechanism controlling the high water level alarm shall be located so that at time of activation the dosing tank has at least one-third (1/3) of its capacity remaining for effluent storage.

[(h) An electrical permit is required for all electrical connections and components.]

[(i) When the projected sewage flow for the system exceeds twelve hundred (1200) gallons per day, or when the static lift is greater than one hundred (100) feet, the Department may exercise reasonable judgment in varying from the minimum pump requirements identified in this rule.]

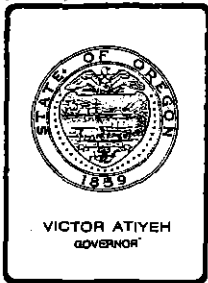
(2) Dosing Siphons. Dosing siphons used in on-site sewage disposal systems shall comply with all of the following minimum requirements:

(a) Shall be constructed of corrosion-resistant materials.

(b) Shall be installed in accordance with the manufacturer's recommendations.

NOTE: Underlined _____ material is new.

Bracketed [] material is deleted.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. N , October 9, 1981, EQC Meeting

Petition to Amend OAR, Chapter 340, Divison 71,
Appendix A(9), Bedroom Definition

Background and Problem Statement

OAR 340-11-047 provides that any person may petition the Commission requesting adoption, amendment, or repeal of a rule.

Mr. Douglas Marshall, R.S. Senior Sanitarian, Tillamook County has petitioned the Commission to amend the current definition of a "bedroom" OAR 340-71 Appendix A(9). The petition is Attachment "A".

The current definition of a bedroom, adopted in 1978, is as follows:

- (9) "Bedroom" means any room within a dwelling which is accepted as such by the State of Oregon Department of Commerce Building Codes Representative or the local authorized building official having jurisdiction.

Mr. Marshall proposes to return to the definition that existed prior to the present definition, which reads as follows:

A "bedroom" means any portion of a dwelling which is so designed as to furnish the minimum isolation necessary for use as a sleeping area and includes but is not limited to a den, study, sewing room, sleeping loft or enclosed porch.

Alternatives and Evaluation

The Commission appears to have two alternatives available:

- (1) Deny the petition and continue use of the present definition.

- (2) Require that rulemaking proceedings be initiated which could result in a rule amendment.

The reason the "bedroom" definition is important is that on-site systems are sized on the number of bedrooms in a dwelling. Generally, the number of bedrooms tends to control the number of individuals who may reside in a dwelling.

The old definition was replaced for three reasons. The definition was too broad and all inclusive. It was too open to abuse by regulators who wished to identify excessive numbers of bedrooms in a dwelling. Most field personnel had problems attempting to equitably define bedrooms under this definition.

The second reason the old definition was dropped in favor of the new was to place the determination of bedrooms in the hands of one agency rather than two, so that citizens are not faced with conflicting determinations by different governmental entities.

The third reason the old definition was dropped was because a minimum sized system to serve a dwelling was adopted into the rules. The rules now provide that the minimum system for a dwelling be sized for 4 bedrooms. With this rule amendment (minimum system) the definition of bedroom becomes less critical.

Department program staff are not aware of other contract counties or Department offices that have the same problem alluded to by Mr. Marshall, or would favor a modification of the definition. Program staff believe the reasons for modifying the old definition remain valid.

The Department is attempting to reduce the frequency of on-site rule changes to once per year and presently proposes to move to public hearings with a rule amendment and correction package in January, 1982.

Summation

1. OAR 340-71-047 provides that any person may petition the Commission requesting amendment of a rule.
2. A petition to amend OAR 340-71 Appendix A(9), definition of a bedroom, has been received from Mr. Douglas Marshall, Senior Sanitarian, Tillamook County.
3. Program staff believe the reasons for establishing the present definition remain valid.
4. The Department proposes to hold public hearings on a general rule amendment package in January 1982.
5. The Commission may deny the petition or require that rulemaking proceedings be initiated.

EQC Agenda Item No. N
October 9, 1981
Page 3

Directors Recommendation

Based upon the summation it is recommended that the Commission instruct staff to include Mr. Marshall's proposed definition in the January 1982 rule amendment package in order to elicit testimony.

Bill

William H. Young

Attachments: A - Petition to Amend OAR 340-71 Appendix A(9).

T.J. Osborne:g
229-6218
September 8, 1981

XG410 (1)

Tillamook County Health Department

ATTACHMENT A

September 10, 1981

COURTHOUSE
TILLAMOOK, OREGON 97141
842-5511 • EXT. 354

Environmental Quality Commission
% DEQ Headquarters
522 S.W. Fifth
Portland, Or 97207

Re: Petition to Amend Oregon
Administrative Rule (OAR)
340-71-Appendix A (9), De-
finition of a bedroom

Dear Commissioners:

The current OAR (January 31, 1981, page Appendix A-1) definition of a bedroom is shown in brackets and the proposed changes are underlined.

(9) "Bedroom" means any [room within a dwelling which is accepted as such by the State of Oregon Department of Commerce building codes representative or the local authorized building official having jurisdiction] portion of a dwelling which is so designated as to furnish the minimum isolation necessary for use as a sleeping area and includes but is not limited to a den, study, sewing room, sleeping loft or enclosed porch.

As the Senior Sanitarian in Tillamook County, I am encountering problems with the current definition of a bedroom. Our county has instituted a one-stop permit (copy enclosed) and I must rely on the building official for final determination of a bedroom. The building official looks at the blueprint from a structural point of view, ie: the building code specifies varying window heights and area in sewing rooms as opposed to bedrooms. As a sanitarian I am concerned with peak loading and long term life of the sewage disposal system. A den, hobby or sewing room, recreational room or study, with a door and closet should be counted as a bedroom when designing the drainfield.

This discrepancy occurs on new construction and remodeling of older homes. To do my job properly I need authority in determining what is a bedroom. I have requested that this item be placed on the agenda of the next regular Commission meeting. The Tillamook County Board of Commissioners are aware of the problem and supports this request. We are currently in contract negotiations with the Department of Environmental Quality and have unsuccessfully attempted to include an amended definition of a bedroom into the new contract (copy of DEQ August 11, 1981 letter enclosed). Should the commission feel a state-wide rule amendment is unwarranted, I would recommend a Geographic Area Special Consideration Rule 340-71400(3) specifically for Tillamook County that amends the definition of a bedroom.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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SEP 14 1981

OFFICE OF THE DIRECTOR

I feel that this petition affects all Senior Sanitarians in the contract counties and the Supervising Sanitarians in all other counties. A list of these persons and their addresses should be readily available at DEQ Headquarters so that all of the above mentioned sanitarians can be notified.

Respectfully,



Douglas Marshall, R.S.
Senior Sanitarian

cc: Roger Pease, Administrative Assistant
Tillamook County Commissioners

Enclosures

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

TO: Doug Marshall, Tillamook County

DATE: August 11, 1981

FROM: *JSO* Jack Osborne

SUBJECT: Item 26 in Tillamook County's Proposed Contract -
Who Determines What Constitutes a Bedroom

Doug, we have reviewed this proposal with Legal Counsel, Ray Underwood. Ray is of the opinion that this item is inappropriate because the current rules identifies the Department of Commerce, or their agent, as the agency to make this interpretation. To allow this provision in the contract would be a violation of the rules.

What constitutes a bedroom may be a problem for existing approved lots, but for future approvals it should be less of a problem because of the minimum 4 bedroom system size requirement.

TJO:l
XL451 (1)

RECEIVED

AUG 13 1981

TILLAMOOK COUNTY
ENVIRONMENTAL HEALTH
DEPARTMENT

TILLAMOOK COUNTY PERMIT APPLICATION for Building, Planning, and Sanitation

APPLICANT _____ **PERMIT #** _____

Legally Recorded Owner _____
 Mailing Address _____ Phone _____
 City _____ State _____ Zip Code _____

CONTRACTOR/INSTALLER
 Building Contractor _____ Reg. No. _____
 Sanitation Installer _____ Reg. No. _____
 Mobile Home Installer _____ Reg. No. _____

LOCATION INFORMATION
 Area _____ Tax Code _____
 Tax Lot _____ Section _____ Township _____ Range _____ **WWM**
 Lot _____ Block _____ Addition _____
 Zone _____ Lot Size _____ x _____ Or _____ Acres _____

PROPOSED USE _____ Single/Multi/Mobile Home/Rec Veh _____ Accessory Structure/Temp RV or MH _____ Addition/Alteration _____ Public/Industrial/Commercial _____ Move/Demolish/Replacement	UNITS/ROOMS _____ Units _____ Bedrooms	VARIANCE/CONDITIONAL USE Date of Approval _____ _____ _____
SIZE OF STRUCTURE _____ Dimensions _____ Square Feet _____ Stories _____ Height	WASTE DISPOSAL _____ Sewer District _____ Septic Tank/Drainfield _____ Garbage Disposal _____ Other	ROAD ACCESS _____ State Highway _____ County Road/Public Way _____ Private Road _____ Other
MOBILE HOME/RECREATION VEHICLE _____ License Number _____ Make _____ Year _____ State Insignia	WATER SUPPLY _____ Private/Public _____ Creek/Spring/Well _____ Other	COMMENTS: _____ _____ _____

SEPARATE STATE OF OREGON PERMITS ARE REQUIRED FOR ELECTRICAL, PLUMBING AND MOBILE HOME INSTALLATION WORK AND BUILDINGS DESCRIBED IN SECTION 301. (a) OF THE U.B.C. 1979 EDITION, WHICH REQUIRE A PERMIT BY THE OREGON STATE FIRE MARSHALL.

APPROVED PERMIT INCLUDES ONLY WORK DESCRIBED ABOVE AND/OR PLANS AND SPECIFICATIONS BEARING THE SAME PERMIT NUMBER AND WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES GOVERNING ZONING, SANITATION AND CONSTRUCTION THROUGH OUT TILLAMOOK COUNTY.

THE GRANTING OF THIS PERMIT DOES NOT PRESUME TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF ANY STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PERFORMANCE OF CONSTRUCTION.

THIS PERMIT BECOMES NULL AND VOID IF CONSTRUCTION, INSTALLATION AND/OR PLACEMENT AS AUTHORIZED IS NOT COMMENCED WITHIN 180 DAYS OR DISCONTINUED.

THIS PERMIT IS ISSUED ACCORDING TO CURRENT STATE AND COUNTY CODES. PRIOR TO CONSTRUCTION OR PLACEMENT IT IS ADVISABLE THAT YOU CHECK THE DEED FOR THE PROPERTY IN CASE OTHER RESTRICTIONS APPLY.

FEEES ARE NOT REFUNDABLE

APPLICANT: _____ **DATE** _____
 SIGN IN OWN HANDWRITING

CONDITIONAL/COMMENTS

White/Office-Pink/Building-Green/Sanitation-Blue/Planning-Yellow/Applicant-Gold/Assessor

ITEM	APPROVED BY	DATE	RECEIPT #
1 ZONING			CONSTRUCTION COST \$
2 SANITATION			BUILDING FEE \$
3 HOUSE NUMBER			SANITARIAN FEE \$
4 PLAN CHECK			MOBILE HOME FEE \$
5 ACCESS			RECREATION VEHICLE \$
6 MOBILE HOME			PLAN CHECK FEE \$
RECREATION VEHICLE			SUR CHARGE \$
7 BUILDING OFFICIAL			TOTAL FEE \$

NAME

PERMIT NO.



3300 RIVERSIDE DRIVE P. O. BOX 5807 COLUMBUS, OHIO 43221 (614) 457-3051 TELEX NO. 245-461

December 16, 1981

Mr. Sherman O. Olson, Jr. R.S.
Subsurface Sewage Systems Section
Department of Environmental Quality
P. O. Box 1760
Portland, Oregon 97207

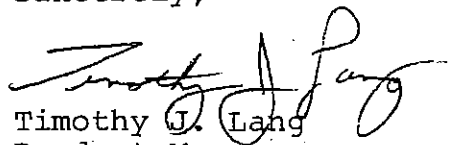
Dear Mr. Olson:

Per our discussion, I have attached a revised copy of our proposed regulations for gravel-less disposal trench systems. Please let me know if further revisions are required.

As I mentioned in my letter of December 9, 1981, we request that this proposed regulation be adopted by the State of Oregon and be included in Chapter 340--Division 71 of the Oregon Administrative Rules.

It was a pleasure meeting with you and Mark Ronayne this week in Chicago. I hope that we will be able to get together again in the near future.

Sincerely,


Timothy J. Lang
Product Manager

TJL/dd

Attachment

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
DEC 27 1981

WATER QUALITY CONTROL

ADS green
number 1 in the land.

340-71-355 Gravel-less Disposal Trench Systems.

- (1) Gravel-less disposal trench systems may be permitted on any site meeting the requirements for installation of standard subsurface systems.
- (2) Distribution pipes for gravel-less disposal trench systems shall conform to the requirements in Appendix F, Section II-A-6.
- (3) Gravel-less disposal trenches shall be constructed pursuant to the standards identified in OAR 340-71-220.

Exceptions:

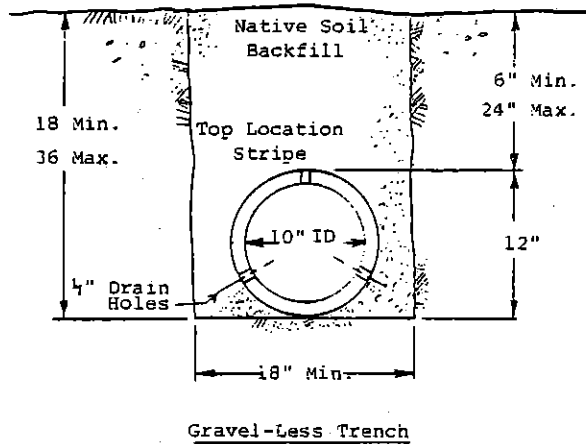
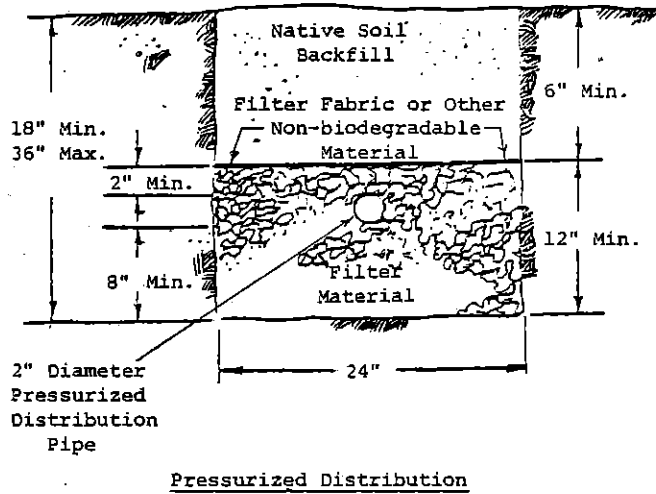
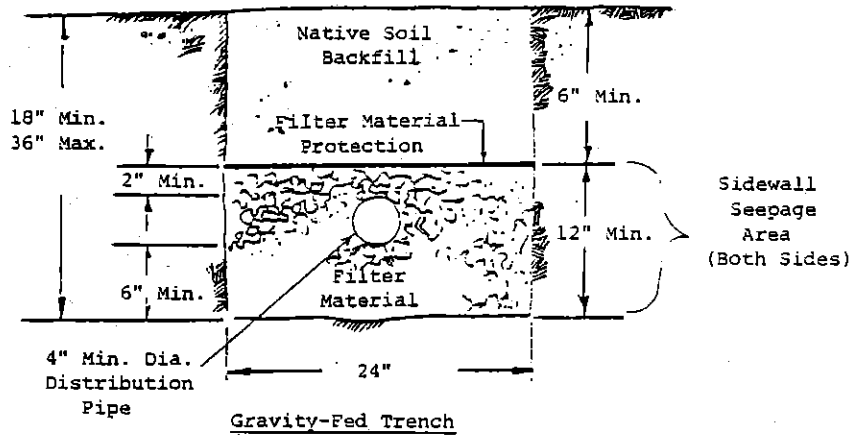
- (a) The bottom trench width shall not be less than eighteen (18) inches wide; and
- (b) The provisions of OAR 340-71-220(8)(e) through (g) are not applicable.

340-71-415 Formal Variances.

- (1) Variances from any standard contained in Rules 340-71-220 and 340-71-260 through 340-71-315 and 340-71-355 may be granted to applicants for permits by special variance officers appointed by the director.

DIAGRAM 12

DISPOSAL TRENCH CROSS SECTION



Appendix F, Section II-A-6

- (6) Gravel-less subsurface disposal systems shall be constructed using corrugated polyethylene pipe meeting the requirements of ASTM F 667. The pipe shall have two rows of holes spaced approximately one hundred twenty (120) degrees apart and approximately one hundred twenty (120) degrees apart each from the location stripe which shall be a contrasting color. The drain holes shall be a minimum of one-half ($\frac{1}{2}$) inch diameter. The minimum outlet area shall be one (1) square inch per lineal foot of pipe. There shall be at least one (1) drain hole present in the valley of each corrugation.

The gravel-less subsurface disposal pipe shall be encased in a factory-installed spun-bonded nylon filter fabric meeting the following requirements:

- (a) Weight (ounce per square yard)
Per ASTM D 1910 - 0.85 ounces (nominal)
- (b) Fiber Size, Denier per Filament (dpf)
4.7 (nominal value)

Corrugated polyethylene pipe shall be installed in twenty (20) foot sections or less and shall be connected with polyethylene fittings and couplings that comply with the requirements of ASTM F 667.



DEPARTMENT OF JUSTICE

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

November 9, 1981

Sherman O. Olson, Jr.
Water Quality Control Division
Department of Environmental Quality
522 S.W. Fifth Avenue
Portland, Oregon 97204

RECEIVED
NOV 10 1981

Re: Aerobic Systems Rule, OAR 340-71-345;
Community Systems Rule, OAR 340-71-500.

Water Quality Division
Dept. of Environmental Quality

Dear Sherm:

I have two other rules that need improvement to bring to your attention. First, the aerobic systems rule, OAR 340-71-345, contains an ambiguity which is not really necessary and which could pose problems of enforcement.

That rule provides at subsection (2)(f) that "The rules for Community Systems contained in OAR 340-71-500 shall apply where applicable." (Emphasis added.) Turning to 340-71-500 it is not entirely clear which sections are intended to be included by the reference.

It appears easy to delete some of the sections and subsections. It is clear that in subsection (1)(a) of 340-71-500, the definition of "community systems", is not applicable. It also appears that it is not necessary to include subsection (1)(b), the definition of "person", because although it differs slightly (by using the word "means" instead of the word "includes") it is otherwise identical to OAR 340-71-100(20) and -105(74). That raises another issue--the wisdom and necessity of having separate rules for "definitions", OAR 340-71-100, and "glossary of terms", OAR 340-71-105, containing some identical language, e.g., 340-71-100(2), (20), (22), -105(4), (73), (85).

Neither does it appear that section (2) (permit required) is applicable because it is redundant of OAR 340-71-160(1).

It is not clear whether the section (3) (2,500 gallons minimum) is or should be applicable.

It appears clear to me that section (4) (operation, maintenance and financing plans required) should be applicable, however, there is nothing to give any guidance as to whether or not in fact it is applicable.

Sherman O. Olson, Jr.
November 9, 1981
Page No. 2

Regarding section (5) (standards for standard or alternative systems applicable), it appears that it is not applicable because it is redundant of 340-71-345(2)(b).

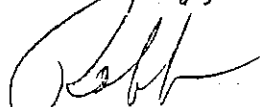
With respect to section (6), it appears evident to me that subsection (a) (ownership by municipality or association required) should be applicable, however, there is nothing to assure that interpretation. Subsection (b) (annual inspection required) does not appear to be applicable because it is redundant of 340-71-345(6).

Finally, it does not appear clear whether section (7) is or should be applicable to aerobic systems. That section requires denials to be conducted under formal contested case procedures. The wisdom of providing that the denials of all community system permit applications constitute contested cases is suspect. No doubt many community systems serve commercial facilities and parcels larger than 10 acres and therefore are by statute and rule required to be contested cases. ORS 183.310(2)(a)(C), (3); 454.655 (7); OAR 340-71-165(2), (3). However, there probably are community systems which do not serve such activities or parcels. Denials of applications for such systems are not required by statute to be contested cases, but the Commission can, as it has done, make them into formal contested cases with right to formal hearings, etc. It would be preferable not to make those into formal contested cases. It is not clear whether section (7) is "applicable" to aeration systems. It probably should not be applicable to all aeration systems. Rather, it should only be applicable to those aeration systems which otherwise fit within the statutory and regulatory definition of contested cases contained in 340-71-165(2), (3). Therefore, section (7) should not apply to aeration systems.

Because of the above described ambiguities and because the apparent intended incorporated sections and subsections are not of any particularly great number or length, I advise you to either refer specifically to the sections and subsections intended to be incorporated into 340-71-345 or to actually incorporate the specific language which is intended to be incorporated and not rely on the present vague cross-reference.

Please call me if you have any questions.

Sincerely,



Robert L. Haskins
Assistant Attorney General

RLH/bc
cc: Fred Bolton



STATE OF OREGON

INTEROFFICE MEMO

TO: Sherman Olson via Jack Osborne

DATE: September 24, 1981

FROM: Dick Nichols

SUBJECT: SSSD - General

Please revise paragraph C in Appendix D as follows:

"C. Each dosing tank, except those employing siphons, shall have a minimum liquid capacity equal to the projected daily sewage flow or four hundred fifty (450) gallons, whichever is greater, for projected flows up to twelve hundred (1200) gallons per day. The Department may use its discretion in sizing dosing tanks when:

- 1.) The projected daily sewage flow is greater than twelve hundred (1200) gallons per day.
- 2.) The projected daily sewage flow is less than two hundred (200) gallons per day, the system is not low-pressure distribution, and the system serves a commercial establishment.

The liquid capacity shall be as measured from the invert elevation of the inlet fitting."

I think a large dose tank is unreasonable for a small commercial establishment that only needs a pump to overcome an elevation problem. If the pump fails, the sewage either backs into the building or the alarm comes on. At that point, the owner calls the plumber and closes the toilet to use. This is only a minor inconvenience. There is no real need for storage of effluent and consequently, no need for a large dose tank.

Quite frankly, the alarm should be optional. If the system were strictly gravity, the owner would only find out about a failure when the water backed into the house. Granted its a little bit more messy, but it is not that significant.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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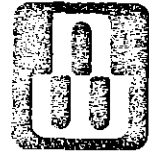
SEP 28 1981



Contains Recycled Materials

NORWESCO, INC.

Roto-Foam Division, 4365 Steiner Street, St. Bonifacius, Minnesota 55375 • Tel. (612) 446-1945



August 27, 1981

Sherman O. Olson, Jr.
Assistant Supervisor
On-site Sewage Systems Section
Water Quality Division
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Dear Mr. Olson:

Norwesco has agreed to ship the tank to you with the fittings assembled and in place, along with the required lastimeric (rubber) inlet and outlet joining couplings.

Norwesco, Inc. Roto-Foam Division would appreciate it if at the next meeting of the board, a discussion regarding the acceptance of the construction of the Norwesco, Inc. Roto-Foam Division polyethylene septic tank be included in the meeting. Also on the agenda for this meeting should be included a discussion for approval of the six-inch inlet and outlet inspection openings.

For your information, - 1,000 septic tanks have been installed in the Minnesota, North and South Dakota, Wisconsin, Nebraska, Indiana, Illinois, Mississippi, Pennsylvania, Oklahoma and Montana area. Those without the six-inch inspection openings create a problem. To modify the Norwesco tank, enabling it to have eight-inch inspection openings over the inlet and outlet baffles, would create a tremendous financial strain. The Norwesco molds would have to be rebuilt in order to furnish an eight-inch opening.

Norwesco is looking forward to obtaining the septic tank construction code variance and approval of the Norwesco polyethylene septic tank by the state of Oregon.

May we hear from you at your convenience?

Sincerely,

Gail Forsyth
Roto-Foam Division

GF/ml

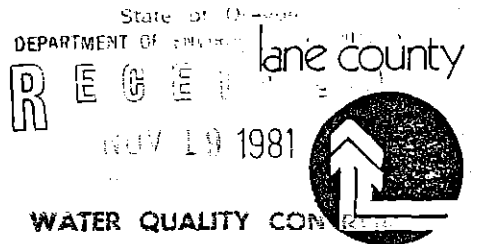
cc: George Granse
Bill Matzke

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

AUG 31 1981

WATER QUALITY CONTROL

MEMORANDUM



TO Environmental Quality Commission
FROM Roy Burns, Lane County
SUBJECT Proposed On-Site Rule Amendments

DATE June 15, 1981

Lane County staff reviewed the proposed amendments and generally concur with DEQ recommendations.

In our short period of analysis and use of the on-site rules subsequent to adoption a number of minor problems associated with administering the rules has occurred. Prior to proposing additional amendments to Chapter 340 we have some suggested changes to the amendments suggested by DEQ staff.

- 1) OAR 340-71-140 Fees General. There are two areas that require further amendments:
 - (A) A definition and conditions for renewal of permits and;
 - (B) Surcharge

We suggest consideration of the following concerning permit renewal:

Construction-Installation Permit Renewal

If field visit required - \$50.00

No field visit required - \$10.00

NOTE: Renewal of a permit will be granted if an application is filed prior to the twelve (12) month original permit expiration, work on the on-site system has been initiated, and the renewal applicant is the original permit grantee.

We recommend amending item (4) on surcharges to permit quarterly as well as monthly submission of revenue to the Dept. of Env. Quality.

We suggest the following amendment: "for separately and forwarded to the Department (on a montly basis.)" as agreed within contracts.

We believe the amendments to OAR 340-71-305(e) Other Sand Filters are reasonable and provide consistency with other alternatives for operation and maintenance. We suggest agents be extended the authority to approve operation and maintenance methods in addition to the Department. The following is suggested:
...Meeting the approval of the Director or agent have been made...

Areas of consideration not addressed within the proposed rule amendments that we are submitting are as follows:

(1) OAR 340-71-160 Permit Application Procedures - General Requirements:

Amendment: (5) (G) The permit would violate any building, ordinance or regulation enacted or promulgated by a constitutional Local government agency having jurisdiction over the subject real property.

Discussion: The issue of land use acceptance is appropriately and adequately addressed at the application stage in OAR 340-71-160 (3). No other provisions of potential conflict to local jurisdictions are stated as a condition for

denial. In many cases water supply adequacy or related concerns need to be recognized where such regulation has been promulgated by a County or City.

(2) OAR 340-71-205 Authorization to Use Existing Systems.

Amendment: (1)...purpose for which a particular application is made. Applications for Authorization Notices shall conform to requirements of OAR 340-71-160 (2) (3) and (4).

Discussion: The procedure required for applying for authorization notices is vague in the current rules. The proposed amendment would clarify administrative procedures and provide consistency for applications through standardization of applications under section 160.

RB/bs

- (1) Why do capping fills require a 6" separation between trench bottom and temp. H₂O table and standard systems just require that the trench not be installed deeper than the temp. H₂O table?
- (2) OAR 340-71-220(7) Dosing tank (p. 27) needs clarification that options are (1) combo tank (2) dosing tank equal to 1 days sewage flow (3) 1100 dosing septic tank.
- (3) Why is the 1100 dosing tank allowed? Doesn't this decrease the effective tank size and eliminate 450 sump, thus removing safety factor of 1 day storage time. With no maintenance program to monitor sludge and skum levels, isn't this asking for problems?
- (4) Conflict. OAR 340-71-275(5) (ii) specifies min. 2" diameter of p-pipe unless plans and specifications show smaller is adequate. This should specify 1 1/4" min. even if plans and specs are provided. Diagram 9 specifies 1 1/4 min., with no qualifier that if this is used, plans and specifications are required.
- (5) The index is skimpy, it needs more listings.
- (6) OAR 340-71-220(12) P.29 Effluent sewer. Add notation that the grade shall be as specified in appendix F.
- (7) Is there a minimum separation required between sand filter box and the drainfield or D box?
- (8) Need specifications for placing pipe under road. E.g. depth, type & method of bedding, etc.
- (9) OAR 340-71-220(2cC) effectively says that effluent can be dumped directly into the H₂O table via rapidly draining materials if loading rate does not exceed 450 gpd/A. Seems it would be consistent with this to eliminate depth to permanent H₂O table requirements on any site where loading rate does not exceed 450 gpd/A.
- (10) How about seepage beds in SL?
- (11) Why do sand filter systems and low pressure systems have nitrate loading factors (450 g/.5A/day) and standard systems don't.
- (12) We need some specifications for stream crossings of pressure effluent sewers.



MULTNOMAH COUNTY OREGON

ENVIRONMENTAL SERVICES/PERMIT SECTION
2115 SE MORRISON STREET
PORTLAND, OREGON 97214

DONALD E. CLARK
COUNTY EXECUTIVE

Inspection (503) 248-5272 Sewage 248-3671
Building 248-3047 Right-of-Way Use 248-3582
Plumbing 248-3668

October 9, 1981

T. Jack Osborne, Supervisor
On-Site Sewage System Section
Water Quality Division, D.E.Q.
P.O. Box 1760
Portland, Oregon 97207

RE: Request for an amendment to Subsurface Fees for Multnomah
County (Appendix M)

Dear Jack:

In response to your letter of September 24, 1981 regarding the inclusion of a fee for the repair of a cesspool I recommend instead of the above wording we substitute "Replacement of a Cesspool" with a \$65.00 fee. The use of the word repair would be misleading and inappropriate since a malfunctioning cesspool cannot be repaired but is pumped and filled and a new pool is installed replacing the old one.

In addition we request a fee of \$85.00 for the installation of a septic tank, drainfield and lift pump system and a fee of \$55.00 for a drainfield repair that requires a lift pump. Our field staff finds that more time and field visits are required to inspect those systems than conventional ones thereby increasing our costs.

Enclosed you will find the requested fee additions in proper sequence in the present schedule under Appendix M.

Please call 248-3047 if you have questions on this matter.

Sincerely,

M.W. Whitfield
M.W. Whitfield
Permit Manager

MWW/bm

cc: file

RECEIVED

OCT 13 1981

Water Quality Division
Dept. of Environmental Quality

MULTNOMAH COUNTY FEE SCHEDULE

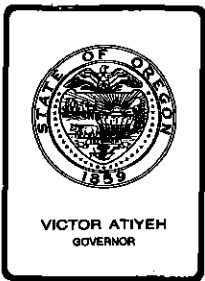
(A)	Septic Tank and Disposal Field's	
(i)	New site evaluation, 1st lot	\$120.00
(ii)	Each addition lot evaluation while on site	120.00
(B)	Seepage Pits, Cesspool or Holding Tanks	
	(New Site Evaluation)	
(i)	Commercial site	120.00
(ii)	Industrial site	120.00
(iii)	Multiple residential site, 1st system	70.00
	Each additional system	50.00
(iv)	Single family residential site	70.00
(C)	Construction Installation Permit	
(i)	Standard septic tank/drainfield, with daily flow of 450 gallons per day maximum	65.00
(ii)	Septic tank capping fill on disposal areas	75.00
(iii)	Sand filter system	100.00
(iv)	Septic tank/drainfield system in excess of 450 gallons per day	65.00
	Plus \$20.00 for each increment of 450 gal/day	
(v)	Septic tank/drainfield/lift pump system	85.00
(vi)	All alternative systems other than capping fill and sand filter systems	100.00
(vii)	Cesspool	65.00
(viii)	Cesspool excess of 20' of rings	100.00
(ix)	Septic tank (maximum capacity 2500 gallons) and one 15' or 20' seepage pit	65.00
(x)	Septic tank (maximum capacity 2500 gallons) and two 15' or 20' seepage pits	100.00
(xi)	System with septic tank larger than 3000 gallons shall be prorated at increments of \$50.00/1000 gal. capacity. \$50.00 for each increment of 1000 gallons of capacity	100.00
(xii)	Holding tank permits	100.00
(D)	Replacement of Cesspool	65.00
(E)	Alteration of Septic Tank and Drainfield	40.00
(F)	Extension of septic tank and drainfield	40.00

RECEIVED

OCT 13 1981

(G)	Repair of Septic Tank and Drainfield	40.00
(H)	Repair of Septic Tank/Drainfield with Lift Pump	<u>55.00</u>
(I)	Inspection of sewage disposal pump truck	25.00
	Each additional licensed truck on premises	10.00
(J)	Evaluation of existing system adequacy	30.00
(K)	Annual evaluation of alternative system (When required including hold tank)	40.00
(L)	Annual evaluation of temporary mobile homes	25.00
(M)	Abandonment of subsurface system	35.00

Additions are underlined



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. E, January 22, 1982, EQC Meeting

Charles Mersereau - Request for Variance to On-Site Sewage Disposal Rules

The pertinent legal authorities are summarized in Attachment "A".

Mr. Charles Mersereau applied to the Department of Environmental Quality, Astoria Branch Office, for a site evaluation for an on-site sewage disposal system on November 2, 1981. The property is identified as Tax Lot 3300, Section 4AA, Township 6 North, Range 10 West, Willamette Meridian, Clatsop County, and is located just north of the city of Gearhart and is within the City's urban growth boundary.

Mr. Gerald R. Campbell, Waste Management Specialist, DEQ Astoria Branch, evaluated the property on November 3, 1981. Two backhoe pits at the proposed site were examined and observed to contain clean, dunal sand to a depth of 96 inches. No evidence of past or current water tables was noted in the soil profile. The westerly portion of the tax lot is located in the active dune area designated by Clatsop County. The proposed location of the house and on-site sewage disposal system is not within the active dune area.

Mr. Mersereau was notified that the proposed site did not comply with the Administrative rules because it is located within the Clatsop Plains Moratorium area. The moratorium was decreed by the Commission preventing the issuance of either construction permits or favorable reports of evaluation. Mr. Mersereau applied for a variance from the Clatsop Plains Moratorium (OAR 340-71-460(6)(e)) to allow issuance of an on-site sewage disposal system permit for a maximum of 375 gallons sewage flow per day (3 bedroom single family residence). The application was found to be complete and was assigned to Mr. Charles H. Gray, variance officer. Mr. Gray scheduled a visit to the proposed site and the variance hearing for November 24, 1981. After closing the hearing, Mr. Gray evaluated the information provided by Mr. Mersereau and others.

Evaluation

The property was found to be 1.31 acres in size. The applicant is petitioning relief under the variance on the basis that no adverse environmental impacts will occur if the variance is granted. Further grounds for petition are that the property is currently held in an estate and in order to settle the estate, the property's true market value must be finalized.

The property sets immediately adjacent to the Pacific Ocean. The soil profile is clean dunal sand without any evidence of a water table within 96 inches as described by Mr. Campbell. Mr. Gray determined there was sufficient area with suitable soils to install an alternative on-site sewage disposal system with equal area for future replacement to serve up to 375 gallons per day sewage flow.

The Department recently received the preliminary draft on the Clatsop Plains Ground Water Protection Plan. The report indicates that projected densities in the area of this property would not exceed the 5 mg/l nitrate limit. The plan recommends that future development with on-site sewage disposal systems utilizing low pressure distribution/sand filter systems can occur on lot sizes of less than one acre in this area.

Although the property is within the Clatsop Plains Moratorium boundary, the installation of an on-site sewage disposal low pressure distribution system to serve up to a three bedroom single family residence would not degrade the ground water. Since the lot size is 1.31 acres, disposal of up to 375 gallons of sewage flow per day is an application rate below that recommended by the Clatsop Plains Ground Water Protection Plan Report. The variance applicant, Mr. Mersereau, provided a statement from the authors of the Ground Water Plan supporting the proposed variance. The statement is Attachment "B".

After evaluating this site and after holding a public information hearing to gather testimony relevant to the requested variance, Mr. Gray finds that the proposed location and type of on-site sewage disposal system to be used would function properly and not create a public health hazard or cause pollution of public waters, or degrade the Clatsop Plains aquifer.

Variance Officer's Recommendation

Mr. Gray recommends the EQC find that strict compliance with OAR 340-71-460(6)(e), as they pertain to Mr. Mersereau's proposed seepage bed site, are inappropriate for cause. Special conditions to be imposed upon granting variance from the rule include:

1. The on-site system shall be located within the areas identified on the enclosed plan, Attachment "C".
2. The on-site system shall be constructed in accordance with all of the conditions listed in Attachment "D".

3. Before system construction begins, a complete application for a construction installation permit must be submitted to the Department's Astoria Branch Office, and personnel from that office shall issue the permit.

Summation

1. The pertinent legal authorities are summarized in Attachment "A".
2. Mr. Mersereau submitted an application for site evaluation to the Department's Astoria Office. Mr. Gerald Campbell evaluated the property and determined the property complies with the Department's minimum standards for issuance of a construction installation permit. The property, however, cannot be granted a favorable site evaluation or permit since it is located within the Commission authorized Clatsop Plains Moratorium.
3. The Department received a variance application from Mr. Mersereau, which was reviewed for completeness and assigned to a variance officer, Mr. Charles Gray.
4. Mr. Gray examined the proposed site and conducted a public information gathering hearing. After closing the hearing, Mr. Gray evaluated the record and found that an on-site sewage disposal system, limited to a maximum daily sewage flow of three hundred seventy-five (375) gallons, and installed pursuant to specific conditions, could be expected to function properly at the site. Mr. Gray recommends the Commission find that strict compliance with OAR 340-71-460(6)(e), as they pertain to Mr. Mersereau's proposed seepage bed site, are inappropriate for cause, and authorize a construction installation permit be issued subject to special conditions.

Director's Recommendation

Based upon the findings in the summation, it is recommended that the Commission adopt the recommendation of the variance officer as the Commission's findings, and grant variances from OAR 340-71-460(6)(e).

William H. Young
William H. Young *jas*

Attachments 4

- Attachment "A" - Pertinent Legal Authorities
- Attachment "B" - Supporting Letter for Variance Approval
- Attachment "C" - Proposed Plan
- Attachment "D" - Proposed Conditions for Granting Variance

Charles H. Gray:o
229-5288
November 30, 1981
RO165 (1)

ATTACHMENT A

1. Administrative rules governing on-site sewage disposal are provided for by Statute: ORS 454.625.
2. The EQC has been given statutory authority to grant variances from the particular requirements of any rule or standard pertaining to on-site sewage disposal system if, after hearing, it finds that strict compliance with the rule or standard is inappropriate for cause or because special physical conditions render strict compliance unreasonable, burdensome or impractical: ORS 454.657.
3. Mr. Gray was appointed as a variance officer pursuant to the Oregon Administrative Rules: OAR 340-71-425.

RO165.A (1)

ATTACHMENT B
RECEIVED
AUG 27 1981
DIANE SPIES

EXHIBIT G

COPY 1

R. W. BECK AND ASSOCIATES

ENGINEERS AND CONSULTANTS

PLANNING
DESIGN
RATES
ENVIRONMENTAL
ECONOMICS
MANAGEMENT

TOWER BUILDING
7TH AVENUE AT OLIVE WAY
SEATTLE, WASHINGTON 98101
206-622-5000

GENERAL OFFICE
SEATTLE, WASHINGTON
206-622-5000

FILE NO. UU-0000-AE-GA

August 25, 1981

Mr. Jeff Bennett
The Portland Center
150 Southwest Harrison
Portland, OR 97201

Dear Mr. Bennett:

Subject: Clatsop Plains "208" Study
Ground Water Protection Plan

Enclosed please find summaries of water quality data from two test wells that bracket the property we discussed over the telephone on Monday. The chemical constituent which is of concern to the Oregon Department of Environmental Quality (DEQ) is nitrate (NO₃), for which DEQ has set a planning limit of 5 mg/l. As you can see from the tabulation, the well to the south of the property exhibits very high NO₃ concentrations at times, while the well to the north remains nearly void of NO₃. Undoubtedly, the reason for the high NO₃ concentrations in the south well is the wastewater discharge from the condominium complexes, and not an overall deterioration in water quality.

As for the probable success of obtaining a variance for development on the property in question, I do not feel there should be a water quality problem with the densities proposed. However, to further mitigate any possible concern, I would suggest that you propose the use of a low pressure distribution system along with the septic tank. The DEQ has shown some reduction in NO₃ concentrations from these systems, and is in favor of their use.

If I can be of further assistance, please call.

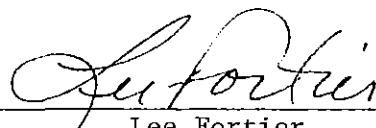
Very truly yours,

R. W. BECK AND ASSOCIATES

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

OCT 21 1981



Lee Fortier
Principal Engineer

LF/lb
Enclosure

WATER QUALITY CONTROL

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
PROPOSED SUBSURFACE SEWAGE DISPOSAL SYSTEM

ATTACHMENT C

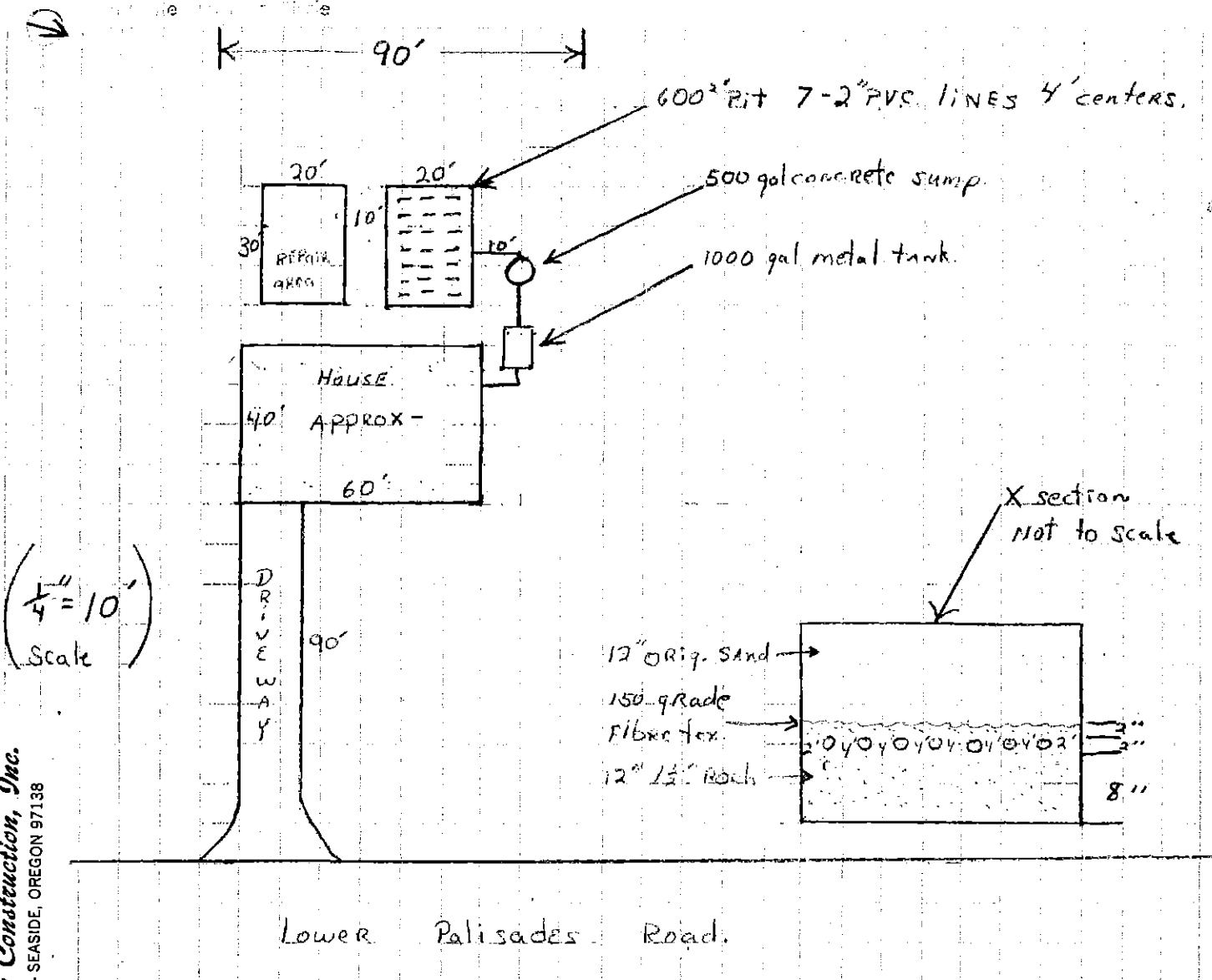
DEC 2 1981

PLOT PLAN

NORTHWEST REGION

Property Owner 610-4AA-3300 Date 11-30-81

Location: T. _____ R. _____ Sec. _____ Tax Lot/Acct. No. _____



Seacoast Nursery Construction, Inc.
BOX 475 - HAMLET RT. - SEASIDE, OREGON 97138

PKS: _____

FOR DEQ USE ONLY

- Approved
- Disapproved

Permit Number _____

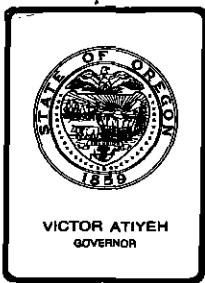
By: _____
(SANITARIAN SIGNATURE)

(DATE)

PROPOSED CONDITIONS FOR GRANTING VARIANCE

1. This on-site sewage disposal system shall serve one (1) single family dwelling having an estimated sewage flow not to exceed three hundred seventy-five (375) gallons per day and no more than three (3) bedrooms.
2. A standard subsurface sewage disposal system, consisting of a 1000 gallon (minimum capacity) septic tank and six hundred (600) square feet of seepage bed, shall be installed within the area identified on the system plan (Attachment C). The seepage bed shall be dug to twenty-four (24) inches depth.
3. Except as authorized by specific variance, all requirements of the Oregon Administrative Rules, Chapter 340-71-100 through 71-600 shall be met.
4. Astoria Branch staff shall inspect the installation of this system at those stages of construction they identify as appropriate to insure proper installation.
5. The permittee shall comply with all local planning, zoning, and building ordinances.

RO165.A (1)



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. F , January 1982, EQC Meeting

Mr. and Mrs. Ronald Walters--Appeal of Variance Approval
Granted to Mr. Marvin Peters.

Background

The pertinent legal authorities are summarized in Attachment "A".

Mr. Peters owns property in Lincoln County, identified as Tax Lots 300 and 301, located in Section 19 AD, Township 9 South, Range 11 West, and containing approximately 18,000 square feet. The property had been examined on several occasions by Lincoln County staff and Department staff to determine its potential for installation of an on-site sewage disposal system. In 1979 it was found that the soil depth to basalt bedrock ranged from twenty two inches to thirty three inches within the three pits examined. The natural ground slope varied from sixteen percent to thirty percent. The basalt bedrock causes groundwater to perch within the soil at depths as close as ten inches from ground surface. The property was further limited in that setbacks were required from the sea cliff, an intermittent stream, and a spring. The property was determined to be unsuitable for drainfield placement because of the shallow soil depth, steep slopes, presence of seasonally perched groundwater at shallow depths, and because of the required setbacks from the sea cliff, intermittent stream, and spring. Adjacent state Highway right-of-way was also examined and found unsuitable because of steep slopes (forty-five to sixty percent) and because of irregular topography with numerous old cutbacks and escarpments. Staff expressed the opinion that the only option to allow residential development on the property would rest with the extension of public sewer services.

The Department's Chief Soil Scientist, Dr. Robert C. Paeth, examined the property after a beach sand fill had been placed, and found the depth to basalt bedrock varied from fourteen inches to about sixty inches. The

native soil was determined to be silt loam over silty clay loam. Slopes were found to range from twenty five to thirty five percent. Dr. Paeth established through preparation of a map that when the setbacks were located, the area remaining on the property was not large enough to place a complete system, including future replacement, even if the soil and slope requirements could be met. Mr. Peters also indicated he wanted to locate his house in that same location (Attachment "B").

Department staff continued to be involved in searching for possible alternatives into mid-1981, resulting in a letter from Mr. William H. Young, Director, Department of Environmental Quality, to Mr. William H. Doak, Soil and Land Use Consultant for Mr. Peters (Attachment "C"). Mr. Young concluded the site would not meet current rules for installation of a bottomless sand filter because of alterations made to the site by fill placement, the presence of a buried spring, and insufficient area for a full-sized replacement sand filter. He advised the only route to obtain an on-site system would be by variance.

The Department received a variance application from Mr. Peters on June 12, 1981. After being reviewed for completeness, it was assigned to Mr. Gary Messer, Variance Officer. Mr. Messer scheduled a visit to the property on June 23, 1981, and a variance hearing on the following day. While examining the property Mr. Messer located an area that met the setback requirements and appeared to be large enough for a system which would combine the sand filter and redundant system alternatives made available in the new rules adopted 3/13/81. This combination was referred to as a redundant sand filter system. The area was where Mr. Peters proposed to locate his house. The soil depth ranged from eighteen to thirty six inches before encountering solid basalt. Mottling was observed in a four to six inch band above the basalt. The natural ground slope varies from twenty four to twenty six percent.

On June 24, 1981, Mr. Messer met with Mr. Peters, Mr. Doak, and Mr. William Zekan, Lincoln County Supervising Sanitarian, to conduct the variance hearing. Mr. Messer discussed his observations from the previous day, and suggested that before opening the hearing they establish that there was sufficient room to install a redundant sand filter system. The system was then staked at the site and found to fit within the limited area available. Mr. Messer found the site to meet the intent of Department's site criteria for an alternative redundant sand filter system. Mr. Peters was notified by letter of the results (Attachment "D") and the county was advised to issue a permit.

On June 27, 1981, Department staff received a copy of the letter, and upon review, contacted Mr. Messer about his interpretation. In approving Mr. Peters' site, Mr. Messer combined part of the siting criteria from two different Commission authorized alternative systems. Such a system can be considered and approved for use only through a variance since the rules were not written to facilitate logical combination. Mr. Messer then notified Mr. Peters by letter that the redundant sand filter system is considered to have been authorized through the variance process (Attachment "E").

During this time the system was being installed. The construction was completed, and a Certificate of Satisfactory Completion issued on August 28, 1981.

On August 31, 1981 Mrs. Ronald Walters contacted the Department to initiate an appeal of the approval. She said a letter was being prepared that would outline the issues. The letter was received on September 10, 1981 (Attachment "F"). It cites procedural irregularities, risks of building on the site, that the neighbors are entitled to public hearing but were denied the hearing in this situation, and that a precedent may have been set.

The Walters appeal was scheduled for Commission action at the October 9, 1981 meeting. On October 5, 1981 the Department received a letter from Ms. Lois Albright, the attorney representing Mr. and Mrs. Walters, indicating she had a conflict with the October 9 date and therefore requested the appeal be continued to an upcoming meeting (Attachment "G"). The next Commission meeting dates were established for December 4, 1981 and January 22, 1982. Ms. Albright was contacted on October 22, 1981, and when informed of the meeting dates stated the December 4 meeting would not be convenient because of a previous commitment. Ms. Albright was provided a letter, dated October 23, 1981, stating the appeal would be placed on the agenda for the January 22, 1982 meeting (Attachment "H").

Evaluation

Mr. Peters property had been examined on many occasions to determine the suitability for placement of an on-site sewage disposal system. Being unsuccessful, Mr. Peters submitted a variance application to the Department. The application was reviewed for completeness and assigned to Mr. Gary Messer. Mr. Messer scheduled a site visit. He examined the property to determine if any on-site system was appropriate with respect to the limitations present. A variance hearing was also scheduled, and at the hearing Mr. Messer met with Mr. Peters, Mr. Doak, and Mr. Zekan. The site observations made by Mr. Messer were discussed, a system was staked at the site, and further discussion occurred. Although Mr. Messer indicated his activities were more of a review, the Department feels he did indeed hold a public information type hearing. Mr. Messer determined that a particular system, a redundant sand filter system, could be installed. Mr. Messer initially approved the system as an alternative system consisting of a combination of two alternatives from the rules. Following staff discussion which concluded that the system should technically be approved as a variance, Mr. Messer notified Mr. Peters the system approval was amended to be a variance approval. Mr. Messer found that strict compliance with a Department rule (OAR 340-71-285) was inappropriate for cause, and therefore granted variance from the rule.

The system was constructed and a Certificate of Satisfactory Completion issued. Mr. Messer's procedures were completely in conformance with those followed in past variance actions.

It is the Department's position that the variance applicant is entitled to a public information type hearing, and the neighbors and other interested persons are welcome to participate if they choose. The question being resolved at the hearing is whether an on-site system will, in the variance officer's judgment, function properly at a particular site, given the site's peculiar limitations. Should the variance officer view favorably, the specific system approved is often not of standard design. Because such a system is accepted for an individual site through the variance process, it would be most difficult to establish a precedent.

Summation

1. The pertinent legal authorities are summarized in Attachment "A".
2. The property was examined on many occasions and found not to comply with the Department's rules for installation of a standard or alternative sewage disposal system.
3. Mr. Peters submitted a variance application to the Department. It was reviewed for completeness and assigned to Mr. Messer.
4. Mr. Messer scheduled a site visit and hearing. He visited the property and gathered information about its limitations. On the day and time of the hearing he met with Mr. Peters, Mr. Doak, and Mr. Zekan to discuss his observations of the site. A system was staked out to establish it could be properly located. The Department considers these activities to be within the parameters of a public information type hearing.
5. Mr. Messer prepared a letter approving the use of a redundant sand filter system. He amended the letter finding strict compliance with OAR 340-71-285 was inappropriate for cause, and therefore, granted variance from the rule.
6. Mr. Peters obtained a permit and constructed the redundant sand filter at the site. A Certificate of Satisfactory Completion was issued for the installation on August 28, 1981.
7. Mr. and Mrs. Walters presented the Department with a letter, dated August 31, 1981, appealing the variance officer's decision.
8. The appeal was scheduled for the October 9, 1981 Commission meeting. At the request of Ms. Lois Albright, attorney representing Mr. and Mrs. Walters, the appeal was withdrawn from the October 9 agenda and finally rescheduled for the January 22, 1982 meeting.

Director's Recommendation

Based upon the findings in the Summation, it is recommended that the Commission adopt the findings of the Variance Officer as the Commission's findings and uphold the decision to approve the variance.

William H. Young
William H. Young
jas

Attachments (7) Attachment A
Attachment B
Attachment C
Attachment D
Attachment F
Attachment G
Attachment H

Sherman O. Olson, Jr.:g
229-6443
September 17, 1981
XG437 (1)

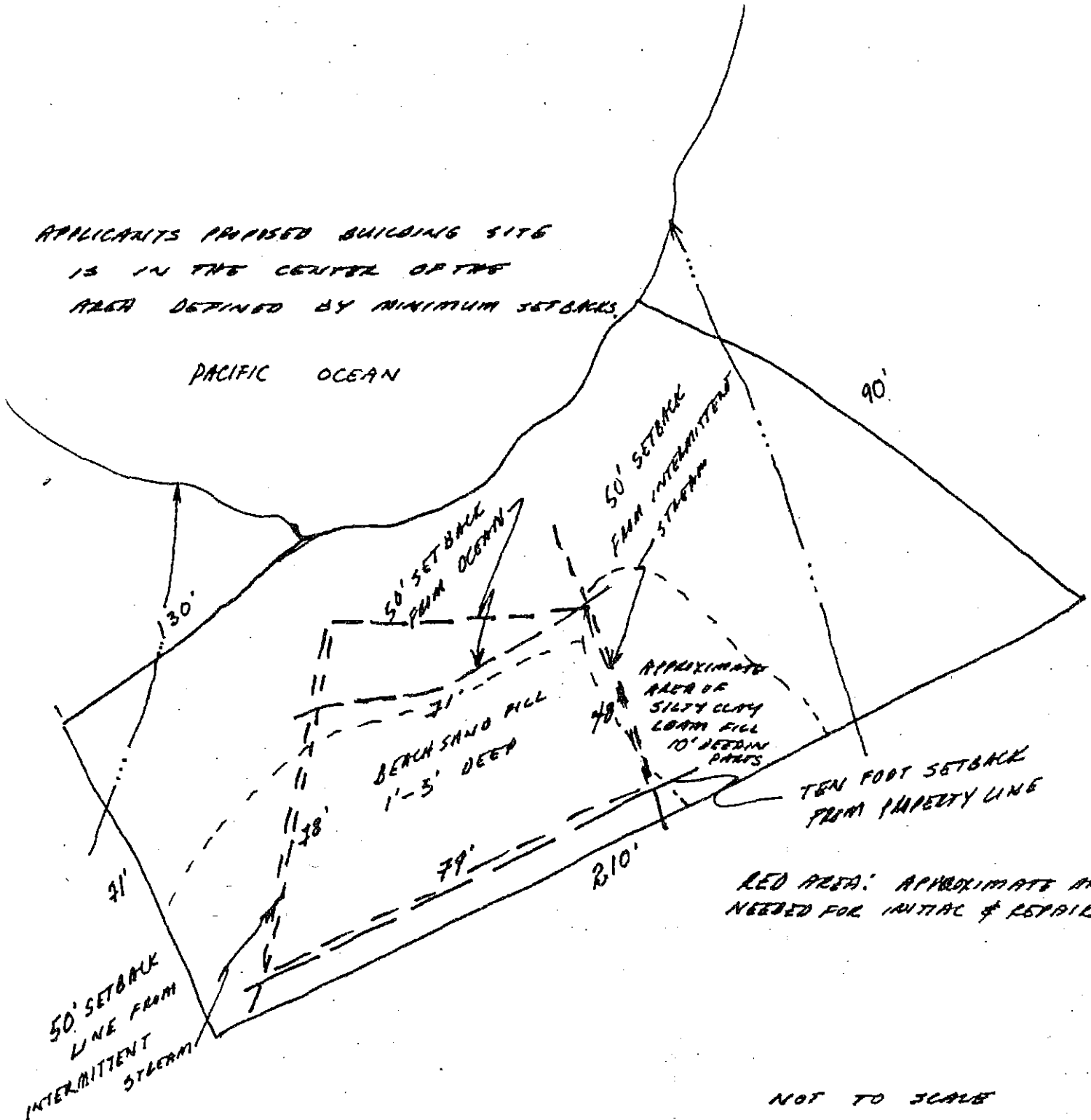
ATTACHMENT "A"

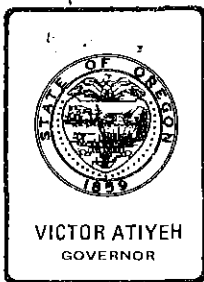
1. Administrative rules governing subsurface sewage disposal are provided for by Statute: ORS 454.625.
2. The Environmental Quality Commission has been given statutory authority to grant variances from the particular requirements of any rule or standard pertaining to subsurface sewage disposal systems if after hearing, it finds that strict compliance with the rule or standard is inappropriate for cause or because special physical conditions render strict compliance unreasonable, burdensome or impractical: ORS 454.657.
3. The Commission has been given statutory authority to delegate the power to grant variances to special variance officers appointed by the Director of the Department of Environmental Quality: ORS 454.660.
4. The variance hearing must be conducted pursuant to the Oregon Administrative Rules: OAR 340-71-430.
5. The Variance Officer's decision may be appealed to the Commission: ORS 454.660.
6. Mr. Messer was appointed as a variance officer pursuant to the Oregon Administrative Rules: OAR 340-71-415.

MARVIN PETERS.

DEPTH TO BASALT VARIES FROM 14 INCHES TO ABOUT 60 INCHES
DEPENDING ON DEPTH OF BEACH SAND FILL. NATIVE SOIL IS SILTY LOAM
OVER SILTY CLAY LOAM.
SLOPES RANGE FROM 25% TO 35%

APPLICANTS PROPOSED BUILDING SITE
IS IN THE CENTER OF THE
AREA DEFINED BY MINIMUM SETBACKS.





Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1780, PORTLAND, OREGON 97207

June 2, 1981

William H. Doak
7525 S.E. Lake Road
Milwaukie, OR 97222

Re: Marvin Peters Property
Lincoln County

Dear Bill:

Along with staff I have reviewed the most recent information on Mr. Peters' property in Lincoln County. We have come to the conclusion that the site does not meet current rules for an open bottom sand filter, for the following reasons:

1. The site has been altered by filling to varying depths.
2. A buried spring exists on the property.
3. It appears insufficient area exists for a full-sized replacement sand filter.

Due to these site deficiencies, the only route available for approval of your proposal would be by variance. In the event Mr. Peters wishes to pursue a variance, variances from at least the following rules should be considered:

1. Requirement for a replacement sand filter - OAR 340-71-150(4)(a)(B).
2. Filling of site - OAR 340-71-220(2)(e).
3. Set back from spring - OAR 340-71-220(2)(i)

In preparing the system design, the sand filter container should be of reinforced concrete with piers anchored to bedrock, and be poured at the time the house foundation is poured. The sand filter site must be protected at all times prior to and during construction.

As part of the application, in addition to other required documents, the following supporting documents will be necessary:

1. A detailed site plan showing all significant features, setbacks, and elevations.
2. A grid of the proposed sand filter site showing the depth of soil every 4 feet.

William H. Doak

June 2, 1981

Page 2

In the event we receive a variance application, it will be processed in the same manner as any other variance. It will be assigned to a variance officer for hearing and decision. In the event the variance is denied, Mr. Peters may appeal the denial to the Environmental Quality Commission (EQC). Conversely, in the event the variance is approved, a neighbor or other person, may appeal the approval to the EQC, who has right to reverse either a denial or approval.

Prior to completing an application for a variance I suggest you and Mr. Peters visit with me and my staff at my office to assure that all questions are answered. Call Jack Osborne at 229-6218, to set a date and time for the meeting.

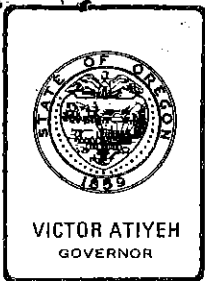
Sincerely,



William H. Young
Director

TJO:1
XL388 (1)

cc: Marvin Peters, 705 Edgewater Rd., Gladstone, OR 97027
Lincoln County
Northwest Region, DEQ
Tillamook Branch Office, DEQ



Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

June 26, 1981

• Mr. Marvin Peters
705 Edgewood Road
Gladstone, OR 97027

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: SS-Variance Assignment/Informal Review
Tax Lots 300 & 301; Sec.19AD; T9S; R11W; W.M.
Miroco Townsite, Blk.1; Lots 8,9,10,11
Lincoln County

Dear Mr. Peters:

On June 23, 1981, I field reviewed your property to familiarize myself with your variance proposal, and to determine if there were alternatives available other than the variance route. Prior to visiting your property, I contacted the Lincoln County Clerk's Office to determine the date of platting and recording of your property. The County informed me your lots have been approved lots of record and have been on the County's tax rolls since June 26, 1945.

Since these lots were approved prior to DEQ's receiving authority to conduct the statewide subsurface sewage disposal program on January 1, 1974, certain design parameters can be considered that are not available to lots created after January 1, 1974.

Specifically, OAR 340-71-220(3)(a)(A) allows systems to be designed at a maximum sewage loading rate of 300 gallons per day provided the dwelling is limited to a maximum of 2 bedrooms. Additionally, OAR 340-71-285 allows these lots to use redundant disposal systems provided there is insufficient area to install a complete replacement system.

On my June 23 field visit, I did locate one area where it appeared a redundant sand filter system could be installed that met all minimum separation distances from intermittent springs and streams and the bank drop-off to the ocean. This area was located where you proposed to construct your dwelling, and does not involve portions of your property which have been graded and filled with beach sand.

Preliminary soil boras revealed soil depths which ranged from 18 to 36 inches before encountering a solid basalt layer. Soil mottling, indicative of a

Mr. Marvin Peters

Page 2

June 26, 1981

temporarily perched water table, generally occurred in a 4 to 6 inch band above the basalt layers. This would be expected considering the convex topography and ground slopes which varied from 24-26%. The soils overlying the basalt appeared to vary from silt loam to silt loam+ in texture. From the data available to me, it appeared that there were concerns previously that temporary perched water tables may occur at higher elevations, but locations were not specified nor diagramed. Should this actually occur in the area I was looking at, I felt upgradient ground water intercepting drains could be installed to assure the potential drainfield site could be dewatered to a minimum depth of 18 inches.

On June 24, 1981, I met you, Bill Doak (your consultant), and Bill Zekan (Lincoln County Supervising Sanitarian) on your property to conduct the variance hearing.

I relayed the findings of my field visit the previous day and requested permission to see if a properly sized system could be staked out which would accommodate a redundant sand filter system. You and Mr. Doak agreed you were receptive to this approach prior to proceeding with the variance hearing.

The basic parameters established for staking out a system were:

1. The portions of the property filled with beach sand would not be used.
2. 50 ft. minimum separation distances would be maintained from all intermittent springs and streams and the drop-off to the ocean.
3. Soil bores would be made and disposal lines would be staked only in areas having minimum effective soil depths of 22 inches.
4. Drainfield sizing would be in accordance with OAR 340-71-290(4), which requires 45 lineal feet of disposal trench per 150 gallons of sand filter effluent for soil textures ranging from loams to clay loams.

Based on the above parameters, Mr. Zekan, Mr. Doak and I were able to design and stake out a drainfield system that would accommodate 180 feet of disposal trenches, evenly split into two redundant disposal systems. As such, Mr. Zekan and I agreed that your property could meet the Department's site criteria for an alternative redundant sand filter system if you were open to modifying your original development proposal.

Mr. Marvin Peters

Page 3

June 26, 1981

You indicated you were receptive to this alternative and authorized Mr. Doak to resubmit a plot plan and permit application to Lincoln County in accordance with the system we had staked out. Additionally, two upgradient overlapping ground water intercepting drains will be installed to insure the disposal area is protected from the temporarily perched groundwaters which may otherwise occur at elevations above 18 inches during winter and spring.

Even though you are reducing your proposal to a two bedroom dwelling, I encourage you to retain the larger 20' x 20' sand filter design. While the redundant disposal system is an option for you, I don't believe it provides the same degree of safeguards associated with a standard repair area. For the small difference in cost, I feel the added treatment capacity of the larger unit is a sound investment.

From your observations of our staking the system out on contour, I'm sure you appreciate that there is no room for error. I advise you to select your installer carefully and use only a licensed installer who is thoroughly experienced with sand filter and redundant system installations.

In regard to your variance application, it would have been very difficult for you to have technically supported a proposal for a bottomless sand filter with no repair option. This is compounded by the fact that the unit was proposed immediately upslope from your house on a sand fill over basalt. I'm glad we were able to find a workable alternative for you.

As to my involvement on your lot, it was more in the nature of an informal review, rather than a variance. I have returned your variance file to the DEQ Subsurface Systems Section with a copy of this letter. Your question regarding a refund of the variance fee you have filed should be directed to:

Sherman Olson, Variance Coordinator
Department of Environmental Quality
P.O. Box 1760
Portland, OR 97207
(Telephone: 229-6443)

Please contact me at 378-8240, Salem, if I can be of further assistance.

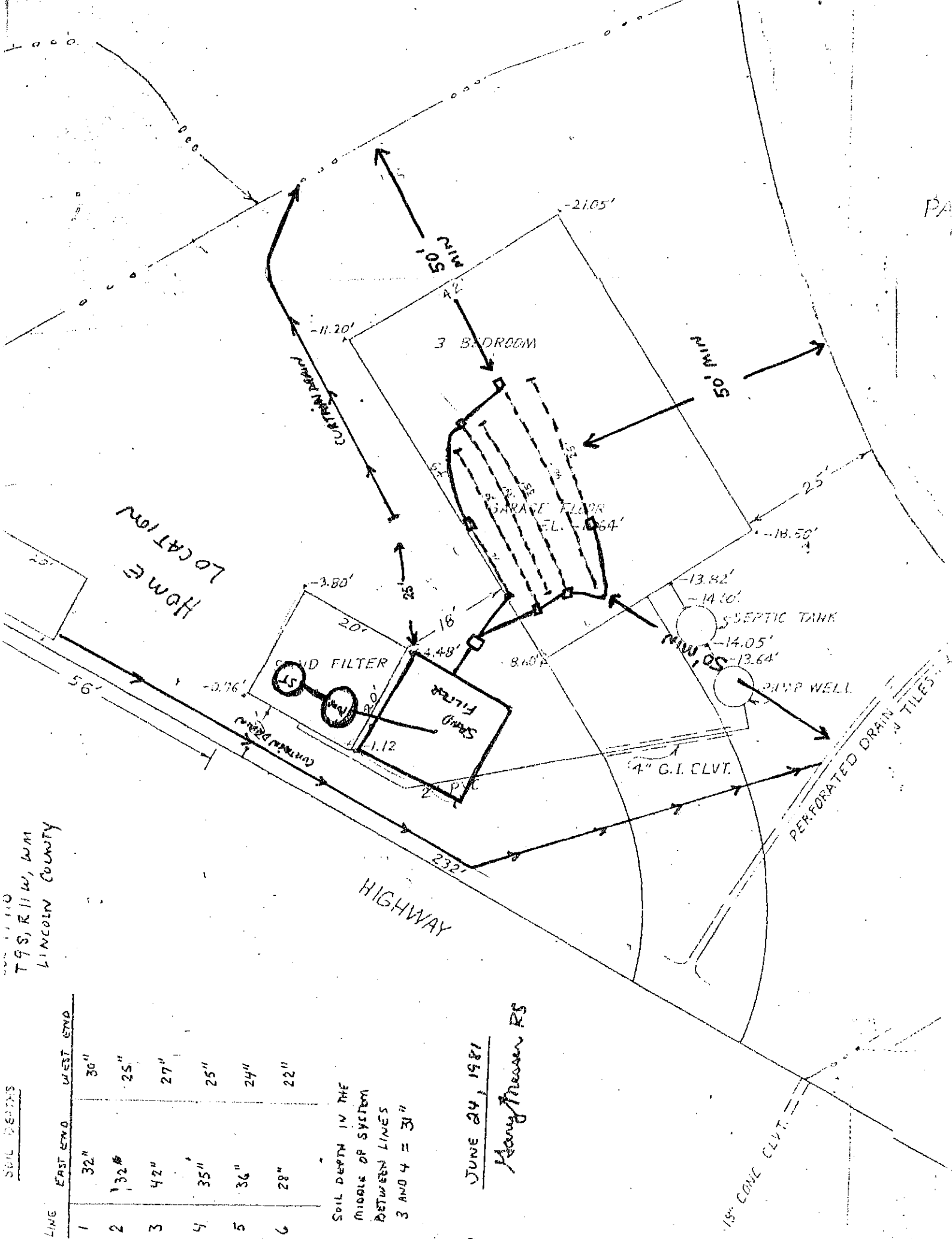
Sincerely,

Gary Messer, R.S.
Variance Officer

GWM/wr

cc: Sherm Olson, Variance Coordinator ✓
cc: DEQ Tillamook Office
cc: Bill Zekan, Lincoln County Supervising Sanitarian, Newport

T9S, R11W, W4M
LINCOLN COUNTY



LINE	EAST STWO	WEST STWO
1	32"	36"
2	32"	25"
3	42"	27"
4	35"	25"
5	36"	24"
6	28"	22"

SOIL DEPTH IN THE
MIDDLE OF SYSTEM
BETWEEN LINES
3 AND 4 = 31"

JUNE 24, 1981

Mary Messer RS

15" CONE CLVT.

July 31, 1981

Mr. Marvin Peters
705 Edgewood Road
Gladstone, OR 97027

RE: SS-Variance Approval
Tax Lots 300 & 301; Section 19AD;
T9S; R11W; W.M.
Miroco Townsite, Blk.1; Lots 8,9,10,11
Lincoln County

Dear Mr. Peters:

On July 30, 1981, the DEQ On-Site Sewage Disposal Section informed me that my June 26, 1981 letter to you and Lincoln County should have been issued as a "variance approval" rather than a finding that your lot qualified for a "standard approval". As I related to you in our telephone conversation of July 30, please consider this letter your "official variance approval". The rationale for granting this variance approval is the same as used in my June 26, 1981 letter. That is:

1. The redundant disposal system design is not used to overcome any treatment or disposal limitations. Its primary purpose is to overcome limitations where the disposal area is restricted in size.
2. The current rules allow for the use of redundant disposal systems for septic tank effluent. I think most people acknowledge that sand filter effluent is treated to a much higher degree (both bacteriologically and chemically) than septic tank effluent. As such, if we can allow disposal of septic tank effluent into a redundant system, I can think of no technical or functional reason for not allowing sand filter effluent to be disposed of into a redundant system.

Since a ruling has been made that the redundant system rules (OAR 940-71-295) currently apply only to sites meeting standard system design criteria, a variance is now deemed necessary in your particular case.

Basically, your variance concerns the question as to whether sand filter effluent can safely be disposed of in trenches that are on 6 foot centers rather than 10 foot centers. Ten foot centers are now required for disposal trenches under the assumption that this spacing will allow the soil to adequately treat the effluent

RECEIVED
AUG 3 1981

Water Quality Division
Dept. of Environmental Quality

Mr. Marvin Peters

Page 2

July 31, 1981

to a point where it will not have any negative impact on the lower or adjacent lines. However, since most line failures can be related to actual clogging of the disposal trenches, rather than clogging of the soil between the trenches, this forms the basic rationale for the use of the redundant disposal design.

In the disposal area I located on your lot, the soils would be classified as primarily well drained silt loams. The depth varied from 22 inches to 42 inches, with no lateral or vertical restrictive layers to drainage until the underlying basalt layer was encountered. Mottling, an indicator of seasonally perched water table levels, was found to vary in depths ranging from 18 inches to 34 inches. The placement of upgradient groundwater intercepting drains should be effective in lowering the seasonal perched groundwaters to even lower levels than indicated by the mottling, even though these levels are acceptable for sand filter system installation.

Based on our Department's monitoring data, a comparison of sand filter effluent with septic tank effluent reveals the following:

1. BOD₅ (biochemical oxygen demand) is about 50 times (or more) less in sand filter effluent.
2. Suspended solids is about 10 times (or more) less in sand filter effluent.
3. Sand filter effluent is already aerobically treated, as evidenced by the conversion of NH₃-N to NO₃-N with a net reduction of Total N of approximately 50%.
4. Coliform bacteria levels are in the magnitude of 1000 times less in sand filter effluent.

This data would lead one to the following conclusions:

1. Due to the reduced nutrient level of the sand filter effluent, it logically should not clog a disposal trench anywhere near the degree septic tank effluent will; nor should it impact the soils between disposal trenches as much as septic tank effluent will.
2. Sand filter effluent has received aerobic treatment with a high degree of biological treatment. The resultant bacteriological levels do not pose near the health concerns septic tank effluent does.

Based on the above, one point seems reasonably clear. That is, a sand filter redundant disposal system can be built on your lot with the same, and perhaps higher, degree of safety as the septic tank effluent redundant systems that are permitted by the rules.

Mr. Marvin Peters

Page 3

July 31, 1981

As such, it is my finding that on your lot strict compliance with the rule is inappropriate, unreasonable, burdensome and impractical. Accordingly, it is my decision that a variance approval from OAR 340-71-285 is in order so that you may proceed with development on your lot.

All conditions specified in my June 26, 1981 letter regarding location and construction of your system remain in effect. A copy of this letter has been forwarded to Bill Ekan of Lincoln County with a request that he modify your permit to reflect that it was issued as a "variance" rather than a "standard" approval.

Thank you for your understanding in this matter. If you have questions, please call me at 378-8240, Salem.

Sincerely,

Gary Messer, R.S.
Variance Officer

GMM/wr

cc: Bill Ekan, Lincoln County Supervising Sanitarian
cc: Esq Tillamook Office
cc: Sherm Olsen, Variance Coordinator

Ron and Charlotte Walters
 Star Route South, Box 9X
 Depoe Bay, OR 97341

August 31, 1981

Mr. Sherman Olson
 Variance Coordinator
 Department of Environmental Quality
 522 S.W. 5th Avenue
 Portland, OR 97207

Dear Mr. Olson:

This is to confirm our conversation of this afternoon in which I initiated an appeal of the decision to grant a variance to Marvin Peters (tax lot number 300-8-301, Section 19AD, T9S, R11W, WM, Lincoln County). We will be joined in this appeal by other residents and property owners of Miroco. We believe there are several issues involved, ranging from procedural irregularities to the risks of building on the site itself.

Our understanding of Oregon law is that neighbors are entitled to public hearings when variances are proposed for septic systems. In Mr. Peters' case, we were denied such a hearing. This is all the more disturbing because a permit was granted after two years of denials by local officials and against the recommendations of experts who know the lots. The system installed by Mr. Peters, moreover, is an unorthodox one, raising special questions of its effectiveness and damage to the environment.

In the course of construction Mr. Peters engaged in practices, such as blasting, that created a potential for damage to the health and safety of residents and passersby, and to the structural integrity of the historical Ben Jones Bridge, which borders his property, as well as to neighboring buildings.

We are concerned about the construction itself and by the possibility that others might unscrupulously attempt to use this case as a precedent by which inappropriate systems could be installed in scenic areas (as ours is), against the opinions of local officials, and without the variance hearing required by law.

Sincerely,

Charlotte Walters
 Charlotte Walters

Ronald G. Walters
 Ronald G. Walters

c: Max Rijken
 Del Isham
 Bill Young
 Clyde Strickland
 Bill Zekan

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 SEP 10 1981

ALBRIGHT & KITTELL

Attorneys at Law

CHRISTOPHER M. KITTELL
LOIS A. ALBRIGHTPLEASE RESPOND TO:
34455 Brooten Road
P. O. Box 639
PACIFIC CITY, OREGON 97135
Telephone 503 • 965-61402302 First Street
TILLAMOOK, OREGON 97141
Telephone 503 • 842-9353

October 2, 1981

Sherm Olson
Water Quality Division
DEQ
522 S.W. Fifth
Portland, Oregon 97207Re: Appeal of WQ-SSS
Variance granted to
Mr. Marvin Peters

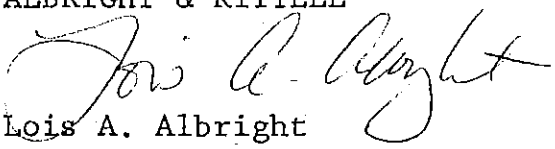
Dear Mr. Olson:

I have been retained by Mr. and Mrs. Ronald Walters to represent them in their appeal of the above mentioned case before the Environmental Quality Commission.

Due to conflicts in my schedule, I will be unable to attend the October 9, 1981 EQC meeting. I formally request that this appeal be continued to either the November 20, 1981 EQC meeting or the January 8, 1982 EQC meeting. If the November 20, 1981 meeting is in Medford, as is presently planned, I respectfully request that I be allowed to present the appeal at the January 8, 1982 meeting as the travel to Medford would be a substantial hardship on myself and my clients.

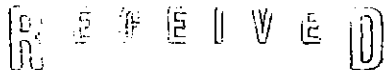
Sincerely,

ALBRIGHT & KITTELL


Lois A. Albright

EA/pr

cc: Mr. and Mrs. Ronald Walters

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

OCT 5 - 1981

WATER QUALITY CONTROL



Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

October 23, 1981

• Ms. Lois Albright
Albright & Kittel
Attorneys at Law
P. O. Box 639
Pacific City, OR 97135

Re: WQ-SSS-Variance
Marvin Peters
Lincoln County

Dear Ms. Albright:

The Environmental Quality Commission has tentatively scheduled their next two meetings in Portland on December 4, 1981 and January 22, 1982. During our telephone conversation on October 22, 1981, you indicated the December 4 date would be inconvenient because of a previous commitment. I will therefore reschedule the appeal of Mr. Messer's variance decision as an agenda item for the January 22, 1982 Commission meeting. A copy of the staff report and agenda will be provided when they are available.

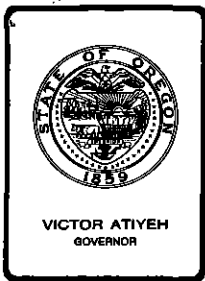
Please contact me at 229-6443 if questions develop.

Sincerely,

Sherman O. Olson, Jr.
Assistant Supervisor
On-Site Sewage Systems Section
Water Quality Division

SOO:g
XG611 (1)

cc: Mr. & Mrs. Ronald Walters
Mr. & Mrs. Marvin Peters
Mr. Gary Messer



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. H , January 22, 1982, EQC Meeting

Proposed Adoption of Geographic Area Rule for
for Christmas Valley Townsite, Lake County,
OAR 340-71-400(4).

Background and Problem Statement

ORS 454.625 requires the Commission to adopt such rules as it considers necessary for the purpose of carrying out ORS 454.605 to 454.745.

ORS 183.390 and OAR 340-11-047 provide for petitions to the Commission to amend rules.

The Department has received a request, signed by 47 persons, "for relief from present evaluation requirements for subsurface sewage system" for Christmas Valley Townsite, Lake County. The request is considered to be a petition for rulemaking (Attachment "A").

Christmas Valley Townsite was platted in the early 1960s on 3000 acres in Northern Lake County. The townsite population is approximately 400 and has a public domestic water supply. There is a shallow permanent water table near the surface which precludes favorable site evaluation reports for construction of standard on-site systems in much of the area. This shallow permanent groundwater is very saline and unsuitable for domestic, industrial, or agricultural use. Domestic water is obtained from wells 300 to 600 feet deep. The Department's Central Region has prepared a detailed report on the groundwater situation in Christmas Valley (Attachment "B").

At its October 9, 1981 meeting, the Commission authorized a public hearing to take testimony on the question of adopting a geographic area rule to provide the relief requested in the petition.

After proper notice in the Secretary of State's Bulletin, a public hearing was held at the Christmas Valley Community Hall on November 19, 1981. The hearing officer's report is attached (Attachment "C").

Alternatives and Evaluation

The alternatives appear to be as follows:

1. The Commission could choose to deny the petition to amend the on-site rules.
2. The Commission could adopt the proposed geographic area rule for the Christmas Valley Townsite, OAR 340-71-400(4), as set forth in Attachment "D."

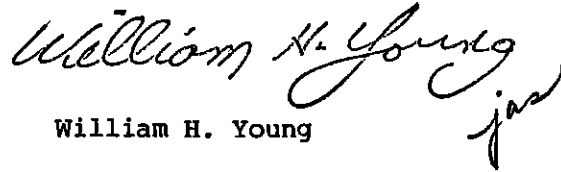
The shallow groundwater in Christmas Valley is saline and unusable for either domestic, industrial or agricultural purposes. Staff suggests the existing rules that require minimum separation between the bottom of an absorption facility and a permanent groundwater table so as to prevent contamination are inappropriate for this situation. The proposed geographic area rule would have this saline groundwater considered, in terms of site evaluation and permit issuance, the same as a temporary groundwater table. Temporary groundwater tables are not afforded protection from contamination, but are addressed within the rules in such a way that temporary water tables are unlikely to cause an on-site system to fail hydraulically. Adoption of the proposed rule would allow standard subsurface systems to be constructed on lots that would otherwise be denied or require installation of more costly alternative systems such as sand filters. The alternative systems generally provide higher levels of treatment, but given the existing shallow groundwater quality, their use is not justified.

Summation

1. ORS 454.625 requires the Commission to adopt such rules as it considers necessary for the purpose of carrying out ORS 454.605 to 454.745.
2. ORS 183.390 and OAR 340-11-047 provide for petitions to the Commission to amend rules.
3. A petition signed by 47 persons requesting "relief from present evaluation requirements for subsurface sewage systems" for Christmas Valley Townsite, Lake County, was received by the Department.
4. At its October 9, 1981 meeting, the Commission authorized a public hearing on the petition.
5. After proper notice, a public hearing was held at the Christmas Valley Community Hall on November 19, 1981.

Director's Recommendation

Based upon the Summation, it is recommended that the Commission adopt the proposed geographic area rule for the Christmas Valley Townsite, OAR 340-71-400(4), as set forth in Attachment "D."


William H. Young

Attachments: 5

- A. Petition for Rule Amendment
- B. Central Region Groundwater Report
- C. Hearing Officer's Report
- D. Proposed Rule
- E. Statement of Need for Rulemaking

SOO:1
XL1292 (1)
229-6443
December 14, 1981

File
SSSD - Christmas Valley
Lake
Groundwater

Box 210
Christmas Valley, Or.
97638

July 2, 1981

AUG 3 1981

Department of Environmental Quality
403 Pine
Box L
Klamath Falls, Oregon

Dear Sir;

I am requesting a blanket variance for evaluation methods concerning sub-surface sewage systems in the Christmas Valley townsite.

I realize substantially the same request has been written up by the Klamath Falls DEQ. branch. However, the Commission will not be able to act on it until late this fall.

Our reasons for this request are as follows; In a two year study the lake level has been held at a reduced elevation. The results were an immediate drop in our ground water table to an average depth of eight feet. This level has not varied in two years. The Gypsum line that the DEQ. checks is still there, the water table is not.

The Park and Recreation Board of Directors, at the June meeting, set the present lake elevation as the maximum allowable water level. We therefore feel this is a permanent cure to our water table problem.

In addition it is my understanding that your own ground water study shows a salinity content that would make development of this resource undesirable.

The entire area in question is served by the city water supply so there should be no question of well contamination.

We are experiencing the largest growth year in the history of Christmas Valley and do not feel that we can have an orderly and progressive expansion with this problem in the central area of town.

Due to the areas urgent needs, I hope you will give our request very serious and prompt consideration.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

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Sincerely

Tom Lambek

REQUESTING RELIEF FROM PRESENT
EVALUATION REQUIREMENTS FOR SUBSURFACE
SEWER SYSTEMS

- 1 Julie Malchow C.V. OR.
- 2 Ruth Williardt P.O. Box # 173 C.V. Oregon
- 3 Charles W. Williardt, Jr. P.O. Box 173 C.V. OR.
- 4 James Olson Box ~~504~~⁵⁰² C.V. OR.
- 5 James Holton C.V. ORE
- 6 Ed Jagers B.O. 163 C.V.
- 7 Virginia Salisbury P.O. Box 195 C.V.
- 8 Clarence Coors PO Box 533 C.V.
- 9 Dolan M. Deulock Po Box 210 C.V.
- 10 Phyllis A. Brown PO Box 426 C.V.
- 11 John A. Pettus P.O. Box 173 C.V.
- 12 Barbara Conwin P.O. Box 553 C.V.
- 13 May H. Mays POB 575 C.V.
- 14 Nollie Turnbow P.O. 305 C.V.
- 15 Laurie Schrock Box 254 C.V.
- 16 Carl Schrock Jr Box 254 C.V.
- 17 Earl Schrock Sr Box 254 C.V.
- 18 Ina K. Proctor Christmas Valley Trailer Ct. C.V.
- 19 Lloyd L. Roberts Box 142 Christmas Valley
- 20 Donald L. Huffman Box 411 C.V. Ore.
- 21 Joann E. Huffman " " "
- 22 Ralph O. Huffman " " "
- 23 J. M. Mohr Box 535 C.V. OR.
- 24 Ann L. Barber Box 407 Xmas Valley, OR.
- 25 Joyce E. Sullivan Box 407 Christmas Valley
- 26 Stephen L. Early " 206 " "
- 27 Myron J. [unclear] WATER QUALITY CONTR. Box 600 C.V. OR.

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- 28 Jon Seubel
- 29 Russell Steen PO Box 274 XMAS VALLEY
- 30 Muriel D. Flores P.O. Box 362 Xmas Vly
- 31 Harry St. Clair Gen. Del. Fort Rock
- 32 Max Steele " " Xmas Valley
- 33 Esther Chambers PO Box 283 Xmas Valley
- 34 Linda M. Sandstrom Star Route Silver Lake
- 35 Alan J. Parmut P.O. Box 190 Xmas Valley
- 36 Roger Croppel PO Box 504 " "
- 37 Dorothy Hockett
- 38 Jack Parker PO Box 244 XMAS VALLEY
- 39 Gary St. Spares P.O. Box 236 C.V. ORE. 97638
- 40 Wendy Bedinger P.O. Box 236 C.V. ORE. 97638
- 41 Betty L. Turnbow PO Box 408 Christmas Valley 97638
- 42 Melvin Search Christmas Valley
- 43 Evelyn D. McP P.O. Box 575 Christmas Valley Oregon 97638
- 44 Linda Parmenter P.O. Box 190 Christmas Valley OR 97638
- 45 Ruth Baker P.O. Box 124 Xmas Valley ORE 97638
- 46 Matthew Johnson General Delivery Xmas Valley Ore 97638
- 47 Pamela L. Morse PO Box 270 C.V. Ore 97638

State of Oregon
 DEPARTMENT OF ENVIRONMENTAL QUALITY
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 JUN 11 1981

WATER QUALITY CONTROL

ATTACHMENT B

EVALUATION REPORT OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY ON-SITE SEWAGE DISPOSAL RULES IN RELATION TO THE GROUNDWATER SITUATION AT CHRISTMAS VALLEY TOWNSITE, LAKE COUNTY

Prepared by
Central Region Staff
Dept. of Environmental Quality

Background

The Department has received a request "for relief from present evaluation requirements for subsurface sewage systems" for Christmas Valley Townsite, Lake County. The request is considered, in effect, to be a petition for rulemaking, therefore the provisions of OAR 340-11-047 apply.

In the early 1960's, the Christmas Valley Townsite was platted on 3000 acres in Northern Lake County (see Appendix A for a map of the townsite). The townsite is located within sections 9, 10, 11, 14, 15 and 16 of T.27S, R. 17E, W.M. Currently, the townsite is sparsely populated (estimated population is 400). Water is provided to each lot in the townsite by Christmas Valley Water District.

Inspection of well logs (Appendix B) and water quality data indicates that the groundwater near the surface is very saline and unsuitable for domestic, industrial or agricultural use. Water obtained from deeper wells is relatively good. For example, the Christmas Valley Water District obtains its water from two relatively deep wells. The district's main well is 650 feet deep and the auxiliary well is 302 feet deep.

While one might conclude that poor quality groundwater at shallow depths is separate from the deeper good quality groundwater, they are probably not. The Christmas Valley area is a groundwater discharge site for water entering from surrounding mountains. Therefore, the groundwater in this area is moving up towards the surface. As it reaches or nears the surface, evaporation concentrates the salts that are dissolved in the water. Over centuries, this process has caused the shallow groundwater to become very saline. Fortunately, since the groundwater flow is up, the saline water near the ground surface is prevented from moving down.

As part of the Development a Lake was constructed. Because of the man-made lake, the shallow groundwater is mounded in this area. Up until about the middle of 1979, almost all of the lots around the lake were approved for subsurface sewage disposal. Apparently this was because salt-affected soils do not display mottling, which is the normal indication of high groundwater levels. The only denials that were issued were based on actual observation of the water table. After working the area for awhile, Ron

Smith, Department Sanitarian from Klamath Falls, realized that there was a high groundwater problem around the lake, despite the absence of mottles.

In September 1979, Dr. Robert Paeth and Steve Wilson, both Department soil scientists, and Ken Mathiot, hydrogeologist with the Water Resources Department, met in Christmas Valley with department field staff. Based upon investigation of soil profiles and geologic and water well data, it was determined that the lower boundary of the horizon of soluble salt accumulation would be used to indicate the highest level of the fluctuating groundwater. (See Dr. Paeth's memo, Appendix C.) It was also decided that

Kent Mathiot would further investigate local groundwater conditions to see if less restrictive subsurface sewage disposal standards would be appropriate.

In a July 18, 1980 memo (Appendix D) to Randy Rees, Department Waste Management Specialist in the Klamath Falls Office, Kent Mathiot suggested that the subsurface sewage disposal rules be relaxed in the Christmas Valley Townsite area. He proposed drainfields be allowed with only an 18-inch minimum vertical separation distance between high groundwater and the bottom of the disposal trench. A 48-inch separation distance is currently specified in the Department's On-site sewage disposal rules for permanent water.

The 48-inch vertical separation between disposal trench and permanent groundwater was established in the on-site sewage disposal rules to assure adequate treatment of sewage, to protect the quality of the groundwater and preserve existing and potential beneficial uses. Reducing the minimum separation distance to 18 inches in Christmas Valley could reduce the level of treatment. Nevertheless, even if treatment is reduced and the shallow groundwater at Christmas Valley Townsite is contaminated with effluent, recognized beneficial uses will not be impacted because of the present poor quality of the shallow groundwater.

Public health would not be affected if the separation distance were reduced to 18 inches. This is because the shallow groundwater quality is not suitable for domestic uses.

The mounding of the water table caused by the artificial lake causes the groundwater to flow away from the lake. This would prevent sewage effluent from contaminating the lake.

An 18-inch separation would be more than adequate to prevent hydraulic failure of drainfields through localized mounding of the water table under the drainfield.

Another way to relax the rules for Christmas Valley Townsite would be to apply the subsurface sewage disposal rules as if the water table were temporary, rather than permanent. If this were done, standard drainfields could be installed where the water table would be at least 24 inches below the ground surface. Considering the permanent water table as temporary

would be consistent with the provisions of OAR 340-71-220(2)(b)(A). The disadvantage with this alternative is that it would further reduce the amount of treatment the effluent receives because of the shorter distance between the disposal trench and the water table. However, because of the natural quality of the groundwater, the advantages of higher levels of treatment are questionable.

An important advantage of the temporary water table alternative is the existing alternative systems in the on-site sewage disposal rules would be more conveniently available. Considering the water table to be temporary for purposes of applying the on-site sewage disposal rules would allow consideration of alternative systems for a site that would not meet the standard rule requirements. Otherwise, if a parcel failed to meet the proposed 18-inch separation requirement, the only alternative would be for the owner to apply for a variance. This immediately increases his cost and causes delays in his development plans.

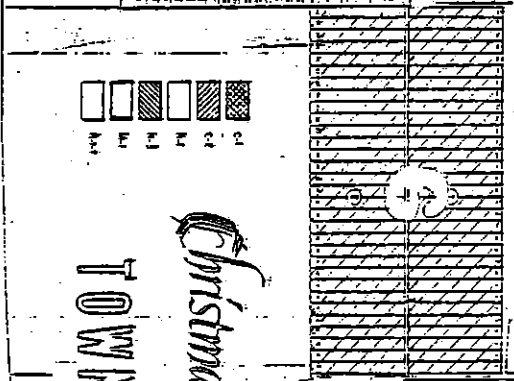
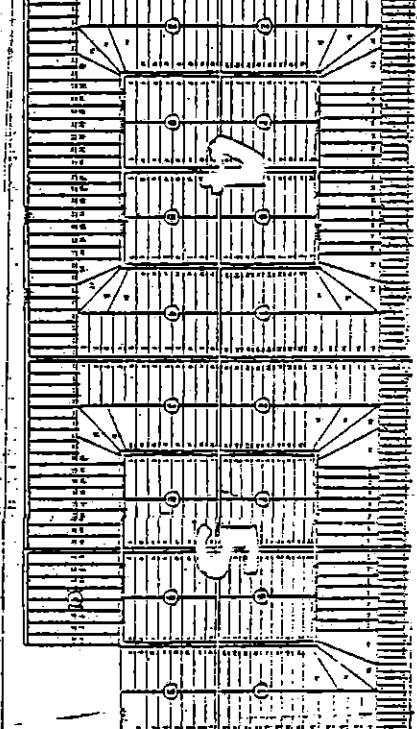
In order to relax the on-site sewage disposal requirements for the Christmas Valley Townsite, the rules must be amended. The best way to do this is to adopt a geographic rule for the townsite. For purpose of holding a public hearing on the issue, the Department should consider both the 18-inch separation alternative and the temporary water table alternative. After the hearing, based upon public testimony, the best alternative can be determined and proposed to the Environmental Quality Commission for adoption.

Conclusions

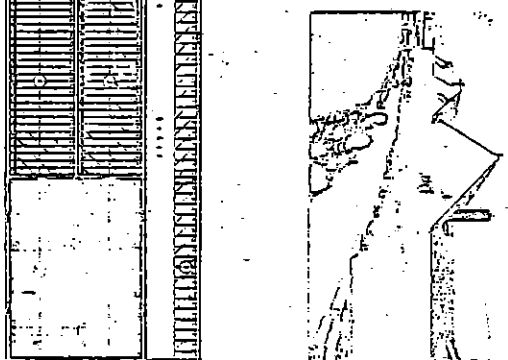
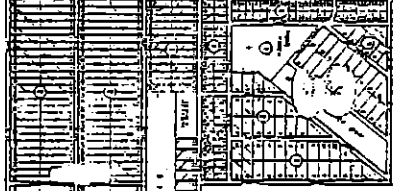
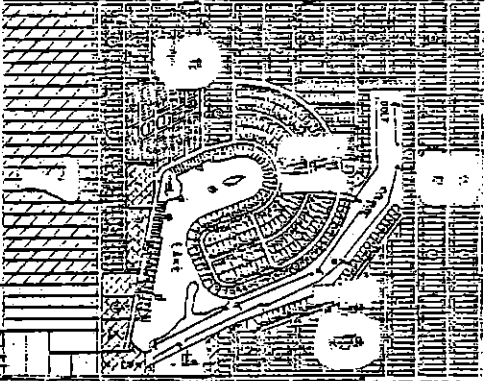
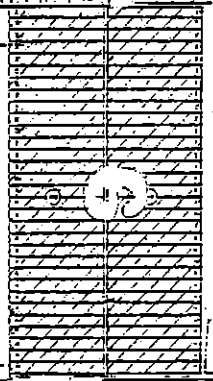
The shallow groundwater at Christmas Valley is poor quality and unsuitable for domestic, industrial and agricultural uses. Relatively good water is available from deeper wells. Current on-site sewage disposal rules are resulting in site denials and are limiting development in Christmas Valley Townsite. Relaxing these rules would not impact recognized beneficial uses or public health. A geographic rule could be adopted that either reduces the minimum separation between the bottom of the disposal trench and high permanent groundwater or allows the Department to apply the rules as if the water table were temporary instead of permanent.

Recommendation

The Department recommends that the Environmental Quality Commission authorize a public hearing to consider adopting a geographic rule for Christmas Valley Townsite in response to the citizens' request.



Christmas Valley
TOWNSITE



NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM 10, OREGON within 30 days from the date of well completion.

WATER WELL REPORT
STATE OF OREGON
WATER QUALITY CONTROL

State Well No. 27/17-176
State Permit No. 5-2286

(1) OWNER:
Name M. Penn Phillips Co.
Address Christmas Valley
Silver Lake, Oregon

(2) LOCATION OF WELL:
County Lake Driller's well number City No. 3
Bearing and distance from section or subdivision corner
Easterly 100', Lot 18, Block 6, Unit 5
Christmas Valley, Section 17, T827S, R17E7W

(3) TYPE OF WORK (check):
Well [X] Deepening [] Reconditioning [] Abandon []
Abandonment, describe material and procedure in Item 12.

(4) PROPOSED USE (check):
Domestic [] Industrial [] Municipal [X] Irrigation [] Test Well [] Other []
(5) TYPE OF WELL:
Rotary [] Driven [] Cable [X] Jetted [] Dug [] Bored []

(6) CASING INSTALLED:
12" Diam. from 0 ft. to 63' 3" ft. Gage 1/4"
" Diam. from ft. to ft. Gage
" Diam. from ft. to ft. Gage

(7) PERFORATIONS:
Perforated? [] Yes [X] No
Type of perforator used
Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(8) SCREENS:
Well screen installed [] Yes [X] No
Manufacturer's Name
Model No.
Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(9) CONSTRUCTION:
Well seal—Material used in seal
Depth of seal 63 & 30 ft. Was a packer used? no
Diameter of well bore to bottom of seal 12 in.
Were any loose strata cemented off? [X] Yes [] No Depth 30
Was a drive shoe used? [] Yes [X] No
Was well gravel packed? [] Yes [X] No Size of gravel:
Gravel placed from ft. to ft.
Did any strata contain unusable water? [] Yes [X] No
Type of water? Depth of strata
Method of sealing strata off cement at 30', Bentonite at 60'

(10) WATER LEVELS:
Static level 24 ft. below land surface Date Mar 20, 63
Artesian pressure lbs. per square inch Date

(11) WELL TESTS:
Drawdown is amount water level is lowered below static level
Was a pump test made? [X] Yes [] No If yes, by whom? J. Pettus
Yield: 500 gal./min. with 80 ft. drawdown after 6 hrs.
no change in static level after test
Bailer test 5' below casing with ft. drawdown after 3 sec.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? [] Yes [X] No

(12) WELL LOG:
Diameter of well below casing 12
Depth drilled 650 ft. Depth of completed well 650 ft.
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

Table with columns: MATERIAL, FROM, TO. Rows include: top soil (0-2), light brown clay (2-20), tuff brown clay (20-50), tuff bed rock, dark brown with some black cinders (50-250), light brownish gray, fine clay (250-385), light brownish gray with clay (385-460), some pumice (460-470), soft hard rock, pourous (470-625), clay with some pumice gravel (625-640), pourous rock (640-650), very hard tight rock (640-650).

Work started Jan 20 1963. Completed Mar 20 1963
Date well drilling machine moved off of well Mar 25 1963

(13) PUMP:
Manufacturer's Name
Type: H.P.
Water Well Contractor's Certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
NAME Gordon Goeres (Person, firm or corporation) (Type or print)
Address Christmas Valley, Silver Lake, Ore.
Drilling Machine Operator's License No. 136
(Signed) Gordon Goeres (Water Well Contractor)
Contractor's License No. 305 Date Apr 23 1963

RECEIVED

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM 10, OREGON within 30 days from the date of well completion.

WATER WELL REPORT

1981

STATE OF OREGON (Please type or print)

State Well No. 27/17-14

WATER QUALITY CONTROL State Permit No. 3-267

(1) OWNER:

Name M Penn Phillips Co.
Address CHRISTMAS VALLEY R.S. SILVER LAKE OREGON

(2) LOCATION OF WELL:

County LANE Driller's well number 4
SW 1/4 NE 1/4 Section 14 T. 27S R. 18 W.M.
Bearing and distance from section or subdivision corner
NORTH 100 ft. - LOT 26
Block 3 - UNIT 1 SW 1/4

(3) TYPE OF WORK (check):

New Well [X] Deepening [] Reconditioning [] Abandon []
If abandonment, describe material and procedure in Item 12.

(4) PROPOSED USE (check):

Domestic [] Industrial [] Municipal [X]
Irrigation [] Test Well [] Other []

(5) TYPE OF WELL:

Rotary [] Driven []
Cable [X] Jetted []
Dug [] Bored []

(6) CASING INSTALLED:

12" Diam. from 0 ft. to 120 ft. Gage 1/4"
Diam. from ft. to ft. Gage
Diam. from ft. to ft. Gage

(7) PERFORATIONS:

Perforated? [] Yes [X] No
Type of perforator used
Size of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

(8) SCREENS:

Well screen installed [] Yes [X] No
Manufacturer's Name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

(9) CONSTRUCTION:

Well seal—Material used in seal Baxtonite
Depth of seal 120 ft. Was a packer used? No
Diameter of well bore to bottom of seal 12 in.
Were any loose strata cemented off? [] Yes [X] No Depth
Was a drive shoe used? [] Yes [X] No
Was well gravel packed? [] Yes [X] No Size of gravel:
Gravel placed from ft. to ft.
Did any strata contain unusable water? [] Yes [X] No
Type of water? Depth of strata
Method of sealing strata off

(10) WATER LEVELS:

Static level 19 ft. below land surface Date 1/5-63
Artesian pressure lbs. per square inch Date

(11) WELL TESTS:

Drawdown is amount water level is lowered below static level
Was a pump test made? [X] Yes [] No If yes, by whom? DATES
Yield: 2300 gal./min. with 34 ft. drawdown after 6 hrs.
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water 60 Was a chemical analysis made? [X] Yes [] No

(12) WELL LOG:

Diameter of well below casing
Depth drilled ft. Depth of completed well ft.
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

Table with columns: MATERIAL, FROM, TO. Entries include BROWN CLAY, GRAY CLAY, GRAY CLAY - SWELLING PERMICE, LAVA ROCK - VERY HARD, LAST 3 FT - PERMICE, GRAY IN COLOR.

Work started MAY 10 1963 Completed JUNE 3 1963
Date well drilling machine moved off of well JUNE 5 1963

(13) PUMP:

Manufacturer's Name
Type: H.P.

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME GORDON GIERIS (Person, firm or corporation)
Address Box 202 CHRISTMAS VALLEY R.S., SILVER LAKE, OR

Drilling Machine Operator's License No. 136

[Signed] Gordon Gieris (Water Well Contractor)

Contractor's License No. 305 Date June 16, 1963

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

WATER WELL REPORT

STATE OF OREGON (Please type or print)

WATER QUALITY CONTROL State Permit No.

State Well No. 27/17-15 B

(1) OWNER:

Name JOHN A. PETTUS Address BOX 273 CHRISTMAS VALLEY R. STA SILVER LAKE, ORE

(2) LOCATION OF WELL:

County LAKE Driller's well number PETTUS #4 NW 1/4 NE 1/4 Section 15 T. 27S R. 17E W.M. Bearing and distance from section or subdivision corner N.T. 3 UNIT 7 CHRISTMAS VALLEY TOWNSHIP

(3) TYPE OF WORK (check):

New Well [X] Deepening [] Reconditioning [] Abandon [] Abandonment, describe material and procedure in Item 12.

(4) PROPOSED USE (check):

Domestic [X] Industrial [] Municipal [] Irrigation [] Test Well [] Other []

(5) TYPE OF WELL:

Rotary [] Driven [] Cable [X] Jetted [] Dug [] Bored []

(6) CASING INSTALLED:

Threaded [] Welded [] 5" Diam. from 0 ft. to 15 ft. Gage 1/4"

(7) PERFORATIONS:

Perforated? [] Yes [X] No Type of perforator used Size of perforations in. by in. perforations from ft. to ft.

(8) SCREENS:

Well screen installed? [] Yes [X] No Manufacturer's Name Model No. Slot size Set from ft. to ft. Diam. Slot size Set from ft. to ft.

(9) CONSTRUCTION:

Well seal—Material used in seal CEMENT Depth of seal 15 ft. Was a packer used? No Diameter of well bore to bottom of seal in. Were any loose strata cemented off? [] Yes [X] No Depth Was a drive shoe used? [] Yes [X] No Was well gravel packed? [] Yes [X] No Size of gravel: Gravel placed from ft. to ft. Did any strata contain unusable water? [X] Yes [] No Type of water? BAD depth of strata 8' Method of sealing strata off CEMENT

(10) WATER LEVELS:

Static level 5 ft. below land surface Date 4-2-64 Artesian pressure lbs. per square inch Date

(11) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made? [] Yes [X] No If yes, by whom? Yield: gal./min. with ft. drawdown after hrs. Bailler test 10 gal./min. with 0 ft. drawdown after 1 hrs. Artesian flow g.p.m. Date Temperature of water 56° Was a chemical analysis made? [X] Yes [] No

(12) WELL LOG:

Diameter of well below casing 5"

Depth drilled 75 ft. Depth of completed well 75 ft.

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

Table with 3 columns: MATERIAL, FROM, TO. Entries include SANDY LOAM, TOP SOIL; SANDY LOAM, WITH ALKALI SOIL; CLAY, GREY - DIATOMITIOUS; CLAY, LOAM, GREY - HARD; CLAY, BLUE - HARD; CLAY, BLUE; MED BLACK SAND & MED. WHITE GRAVEL. WATER BEARING

Work started 4-2 1964 Completed 4-4 1964 Date well drilling machine moved off of well 4-4 1964

(13) PUMP:

Manufacturer's Name Type: H.P.

Water Well Contractor's Certification: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME JOHN A. PETTUS (Person, firm or corporation) (Type or print) Address CHRISTMAS VALLEY SILVER LAKE, ORE Drilling Machine Operator's License No. 257 [Signed] John A. Pettus (Water Well Contractor) Contractor's License No. 401 Date 4-18-1964



STATE OF OREGON

INTEROFFICE MEMO

DEO Regional Operations
DEPT.

229-6933
TELEPHONE

TO: Don Bramhall, CRO Bend

FROM: *Bob* Bob Paeth, Soil Scientist

DATE: 9-25-79

cc: Kent Mathiot Ron Smith
Steve Wilson Gil Hargreaves
Dick Nichols Randy Rees
Tom Hall

SUBJECT: Evaluation of Salt-affected Soils

Last week we looked at a number of deep soil pits in Christmas Lake Valley. Some of these pits were not effected by a ground water table above six (6) feet. Others had observed water tables as shallow as four (4) feet. There were distinct differences in soil morphology associated with these two (2) populations of pits that can be used to evaluate occurrence and depth to ground water. These morphological features are based on the assumptions (1) that the ground water is the source of the soluble salt, (2) salt accumulates in the capillary fringe above the highest level attained by the water table, and (3) the water table fluctuates seasonally.

Soil profiles not effected by fluctuating ground water had gray brown non-calcareous sandy loam surface soils about 12 inches thick. Subsoils consisted of pale brown to brown, moderately calcareous sandy loam to a depth of about 28 inches. Substratum below this depth consisted of light olive brown, weakly calcareous tuffaceous clay stone that contained occasional nodules of gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$). Soil profiles effected by fluctuating ground water had similar surface soils and subsoils but observable differences within the substratum. In all soil profiles observed, there was a pale brown horizon in which crystalline soluble salt had accumulated. In pits that had been exposed for several days, the sidewall was whitish where this horizon occurred. This horizon of soluble salt accumulation rests rather abruptly on substratum consisting of light olive brown, weakly calcareous tuffaceous clay stone with occasional nodules of gypsum.

I suggested that this soil profile was formed by cyclic movement of calcium in the upper part of the soil profile and accumulation of soluble salt from saline ground water below. The tuffaceous clay stone was light olive brown, weakly calcareous and showed no visual evidence of salt accumulation in the zone of ground water fluctuation. Above this zone of ground water fluctuation, capillary rise and evapotranspiration have caused soluble salt to accumulate in the form of small crystals and nodules.

We will use the lower boundary of the horizon of soluble salt accumulation as an indicator of the highest level attained by fluctuating ground water. You should keep good profile notes and observations on actual ground water levels. Those taken during the wet season will be the most useful. Further observation may indicate that the highest level attained by ground water is the top of the horizon of salt accumulation and profile dry out allows crystallization to occur. For the present, we should take the least restrictive approach.

Hopefully, Kent Mathiot will be able to undertake a study involving ground water gradients, quality, and monitoring that will allow a more liberal approach.



Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-8455 or
1-800-452-7813

JUL 21 1980

MEMORANDUM

Date: July 18, 1980
To: RANDY REESE
From: KENT MATHIOT
Subject: CHRISTMAS VALLEY

At your request, I have been reviewing the information available on ground water and soil conditions in the area of the Christmas Valley subdivision. The purpose of this review has been to determine whether or not subsurface waste disposal system regulations could be made less restrictive in this area without causing ground water quality degradation or endangering public health or safety.

The work done to date has not been complete enough to provide a detailed description of all aspects of the ground water system in the area of the Christmas Valley subdivision. However, certain important characteristics have been determined. They include:

1. The ground water table in the region is commonly 20 to 30 feet below land surface.
2. The man-made lake at the resort discharges water to the ground water system.
3. Ground water levels in the immediate area of the development are commonly between 4 and 7 feet below land surface. These levels are higher than those of the region in general, and may reflect the influence of the lake on the local ground water table.
4. Shallow ground water quality in the area of the subdivision is poor, and generally does not meet minimum drinking water quality standards.
5. The subdivision water supply comes from deep wells, is of significantly better quality than the shallow ground water, and does meet minimum drinking water quality standards.

State of Oregon
Department of Water Resources

JUL 21 1981

WATER QUALITY CONTROL

State of Oregon
Department of Water Resources

JUL 21 1981

WATER QUALITY CONTROL

Memorandum to Randy Rees:

July 18, 1980

page two

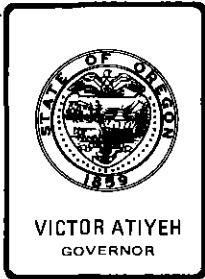
6. Soils in the area commonly consist of 24 to 28 inches of sandy loam underlain by a tuffaceous claystone subsoil.
7. The area has a precipitation deficit, with annual potential evaporation exceeding annual precipitation by approximately 15 inches.

Given these conditions, I feel that the subsurface regulations could be made somewhat less restrictive without resulting in ground water quality degradation, or threatening the health or safety of the general public. I would suggest that you allow the installation of subsurface sewage treatment systems in those areas served by a public water supply, and where soil profile characteristics (see Bob Paeth memo to Don Bramhall of September 25, 1979), indicate that there will be at least 18 inches of unsaturated soil material between the bottom of the drain field trench and the ground water table. This would require a minimum water table depth of 42 inches when a 24-inch trench was installed, or a 36-inch depth with an 18-inch trench.

I would suggest that you discuss this recommendation with Jack Osborne to determine whether or not such a program modification would be within the legal limit of the Department.

KM:wpc

cc: Dick Nichols
Bob Paeth



Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

MEMORANDUM

To: Environmental Quality Commission

From: Donald L. Bramhall, Hearing Officer

Subject: Report on Proposed On-Site Sewage Disposal Rule Amendment
Public Hearing Held in Christmas Valley

Summary of Hearing

On November 17, 1981, at 7:15 p.m., a public hearing was called to order in the Community Hall at Christmas Valley, Oregon. The purpose of the hearing was to receive testimony on a proposed on-site sewage disposal rule amendment which would create a special geographic rule for the Christmas Valley townsite.

Two proposals were presented. Alternative A would require an eighteen inch separation between the bottom of a disposal trench and the highest point reached by the artificially mounded groundwater table. Alternative B would require twenty-four inches of separation between the ground surface and the top of the groundwater table.

Approximately sixty persons attended the hearing. Six persons offered testimony. Five people supported Alternative B and one person supported the concept represented by the proposed rule change. No testimony was received opposing the proposal.

Summary of Testimony

Tom Scurlock a Christmas Valley septic system installer, felt that Alternative B was the best. He felt that the groundwater problem no longer exists because the lake level is now controlled by the Christmas Valley Park and Recreation Board. Mr. Scurlock felt that the less restrictive alternative would take care of the problem. He also wondered if previously denied sites would be approved by file review without the need for a new application and fee if the proposal is adopted.

Esther Chambers of Christmas Valley, agreed with Mr. Scurlock. She also supported Alternative B.

Ole Turnbow of Christmas Valley, also supported Alternative B.

Janice Cannon representing the Lake County Board of Commissioners, expressed the support of the Commissioners for the concept of the proposed rule alternatives and their request for early adoption by the Environmental Quality Commission.

Carl Schumway of Christmas Valley, agreed with the testimony of Mr. Scurlock.

Dennis Fitzgerald a Christmas Valley septic system installer, also supported the adoption of Alternative B, which would provide additional flexibility in installing septic systems.

Hearing adjourned at 7:30 p.m.

NOTE: After the hearing, Department staff remained to discuss the Department programs and policies with the public. This discussion continued for approximately one and one-half hours.

DLB/TJO:1
XL1252 (1)

PROPOSED RULE

OAR 340-71-400(4): Christmas Valley Townsite, Lake County.

- (a) Within the area set forth in OAR 340-71-400(4)(b), the agent may consider the shallow groundwater table, if present, in the same manner as a temporary water table when preparing and/or issuing site evaluation reports and construction-installation permits.

- (b) The Christmas Valley Townsite is defined as all land within the Christmas Valley Townsite plat located within Sections 9, 10, 11, 14, 15 and 16 of Township 27 South, Range 17 East, Willamette Meridian, in Lake County.

XG743 (1)
January 22, 1982

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

IN THE MATTER OF	)	STATUTORY AUTHORITY
THE PROPOSED ADOPTION	)	STATEMENT OF NEED
OF GEOGRAPHIC RULE	)	PRINCIPAL DOCUMENTS RELIED UPON
FOR CHRISTMAS VALLEY,	)	AND STATEMENT OF FISCAL IMPACT
OAR 340-71-400(4))	

1. Citation of Statutory Authority: ORS 454.625, which requires the Environmental Quality Commission to adopt rules for the purpose of carrying out ORS 454.605 to 454.745.

2. Need for the Rule: Present rules, OAR 340-71-220(2)(b)(A), require a vertical separation of 4 feet between the bottom of a disposal trench and permanent groundwater. Shallow permanent groundwater in Christmas Valley is saline and unusable, therefore the 4 foot separation is unreasonable. Adoption of the proposed rule would allow approvals and subsequent development of many lots that are now being denied for standard on-site sewage disposal systems.

3. Documents, reports and studies relied upon in proposing the rule:

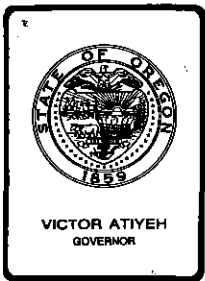
Evaluation Report of the Department of Environmental Quality,
On-Site Sewage Disposal Rules in Relation to the Groundwater Situation at Christmas Valley Townsite, Lake County.

The above report is available from the following Department of Environmental Quality offices:

522 S.W. Fifth Ave., Portland
2150 N.E. Studio Rd., Bend
403 Pine St., Klamath Falls

4. Fiscal and economic impact: A positive fiscal impact would accrue to the owners of lots in Christmas Valley Townsite that may be approved under the new rule that would have otherwise been denied standard on-site sewage disposal systems.

William H. Young, Director
Department of Environmental Quality



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. I, January 22, 1982, EQC Meeting

CITY OF SEASIDE - APPROVAL OF SEWERAGE SYSTEM IMPROVEMENT PROGRAM

BACKGROUND

The City of Seaside presently operates a 1.0 mgd sewage treatment plant with year around discharge to the Necanicum River. The plant is overloaded and is frequently in noncompliance with the NPDES permit. A Stipulation and Final Order was issued by the EQC on September 28, 1977. (Attachment A)

The schedule for sewerage works improvements in the Stipulated Agreement was tied to construction grant funding. A Sewerage Facilities Plan was completed in May of 1979. This plan recommended an alternative that would provide sewage treatment with an oxidation ditch form of extended aeration at the present site with continued effluent discharge to the Necanicum River. Design has not been initiated. The city's position on the priority list did not provide a federal grant and the schedule was extended twice.

Due to continued growth pressure and a deteriorating plant effluent quality the city has made the decision to move forward on their own.

Department staff have met with city officials and discussed in detail the EQC policy on Sewerage Works Planning and Construction adopted on October 9, 1981. (Attachment B)

In response to that policy the city has developed and submitted for approval an improvement program based on both immediate and future actions.

PROPOSED PROGRAM

The proposed program deals with three major areas:

1. Improving Existing Plant Performance

The study identified a number of tasks that could be undertaken by the city that would lessen the waste load impact on the secondary portion

of the plant. One of the most significant of these tasks involves the acquisition of a truck and daily transport of sludge to an approved application site. At the same time, modifications will be made to an existing tank that will convert it to an aerobic digester which will further improve the quality of sludge for beneficial use.

2. Waste Water Flow Reduction

A significant reduction of flow can be accomplished by separating a number of catch basins, requiring roof drain separation and upgrading tide gate surveillance. In addition, if nine corrections out of forty-four identified sources of infiltration are undertaken immediately, it will reduce excess flow to the plant by nearly 1,900,000 gpd.

The engineers estimated that immediate implementation of the two programs listed above could provide an additional 300 connections to accommodate growth during the time required to construct additional plant capacity.

3. Waste Water Treatment Program

The recommended alternative entails the immediate construction of a 1.125 mgd sewage treatment plant and sufficient sewer system rehabilitation to maintain plant flows within treatable levels. This plant would operate in parallel with the improved existing plant until about 1990 when the existing plant would be replaced with a second 1.125 mgd plant. The total cost of implementation of this alternate is estimated to be \$4,878,000. The first phase would require an investment of \$2,588,000 plus an additional \$170,000 for sewer rehabilitation spread between 1982 and 1990.

The first two programs listed above plus design of the sewage treatment plant and preparation for a bond levy to finance phase one construction would require approximately \$509,000, which the city has on hand.

DEPARTMENT EVALUATION

The Department staff has reviewed the proposed program and offers the following evaluation:

1. The technical program as proposed is consistent with the EQC policy in terms of phased construction to make possible local funding on a pay as you go basis. It is also basically consistent with the facility plan.

2. The proposed program will reduce bypassing and generally improve water quality over present conditions, however, basin standards would not be fully met until the second phase of plant construction is completed in about 1990. If grant funding were to become available, the schedule for this second phase could be advanced, however.
3. Work completed with funds on hand should reduce existing plant flow and secondary facility loading so that some additional connections can be authorized immediately with others to follow as significant events such as a bond election and a construction contract award have been completed.
4. Details of the financing plan beyond expenditure of funds on hand are lacking. It is noted that the scope of work agreement between the city and STRAAM Engineers requires "Preparation of a financing plan addressing the waste water program."

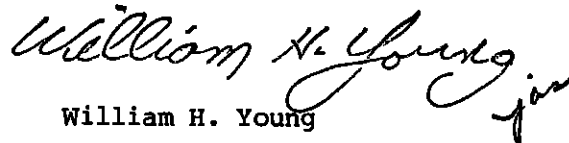
SUMMATION

1. Since 1977, the City of Seaside has been operating their sewage treatment plant under a Stipulation and Final Order with schedules tied to the award of construction grant funds. Due to the city's position on the state priority listing and continued reduction of federal funds, a grant in the near future is unlikely.
2. In line with EQC policy, the city has proposed a program providing for (1) some immediate improvement of the existing plant, (2) both immediate and long-range (ten years) flow reduction through system rehabilitation and inflow correction, (3) immediate design and first phase construction of a new 1.125 mgd sewage treatment plant to operate in parallel with the existing plant followed by an identical second phase of construction (and elimination of the existing plant) by about 1990, and (4) development of a waste water program financing plan.

DIRECTOR'S RECOMMENDATION

1. Based on the summation, it is recommended that the Commission approve in concept the sewerage system improvement program proposed by the City of Seaside; and
2. Authorize the Department to enter into a revised stipulated agreement with the city to reflect this overall program, allow up to 300 additional connections to the sewer system as initial improvements are made, and provide for re-evaluation and authorization of further connections as significant progress occurs to accomplish the following:

- a. Development and approval of a long-range sewerage system financing plan,
- b. Passage of a bond issue for Phase 1 work, and
- c. Award of construction contract.


William H. Young

Attachments: 3

Attachment A	Stipulation & Final Order
Attachment B	Extensions (2)
Attachment C	EQC Policy

Harold L. Sawyer:1
229-5324
December 29, 1981
WL1309 (1)

RECEIVED
SEP 29 1977

Water Quality Division
Dept. of Environmental Quality

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

3	DEPARTMENT OF ENVIRONMENTAL QUALITY,	)	STIPULATION AND
4	of the STATE OF OREGON,	)	FINAL ORDER
5		)	WQ-SNCR-77-159
6	Department,	)	CLATSOP COUNTY
7	v.)	
8	CITY OF SEASIDE,)	
9	Respondent.)	

WHEREAS

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

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

Parameter	Average Effluent Concentrations		Monthly Average kg/day (lb/day)	Weekly Average kg/day (lb/day)	Daily Maximum kg (lbs)
	Monthly	Weekly			
Jun 1 - Oct 31:					
BOD	30 mg/l	45 mg/l	114 (250)	170 (375)	227 (500)
TSS	30 mg/l	45 mg/l	114 (250)	170 (375)	227 (500)
Nov 1 - May 31:					
BOD	30 mg/l	45 mg/l	114 (250)	170 (375)	227 (500)
TSS	30 mg/l	45 mg/l	114 (250)	170 (375)	227 (500)

///

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

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

Parameter	Average Effluent Concentrations		Effluent Loadings				
	Monthly	Weekly	Monthly Average kg/day (lb/day)	Weekly Average		Daily Maximum kg (lbs)	
				kg/day (lb/day)	kg (lbs)		
Jun 1 - Oct 31:							
BOD	45 mg/l	60 mg/l	256 (563)	340 (750)	512 (1126)		
TSS	50 mg/l	75 mg/l	340 (750)	426 (938)	512 (1126)		
Nov 1 - May 31:							
BOD	45 mg/l	60 mg/l	256 (563)	340 (750)	512 (1126)		
TSS	50 mg/l	75 mg/l	340 (750)	426 (938)	512 (1126)		

13 5. The Department and Respondent recognize and admit that:

14 a. Until the proposed new or modified waste water treatment
 15 facility is completed and put into full operation,
 16 Respondent will violate the effluent limitations set
 17 forth in Paragraph 2 above the vast majority, if not all,
 18 of the time that any effluent is discharged.

19 b. Respondent has committed violations of its NPDES Waste
 20 Discharge Permit No. 1590-J and related statutes and
 21 regulations. Those violations have been disclosed in
 22 Respondent's waste discharge monitoring reports to the
 23 Department, covering the period from April 4, 1974 through
 24 the date which the order below is issued by the Environmental
 25 Quality Commission.

26 ///

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

7 7. The Department and Respondent intend to limit the violations which
8 this stipulated final order will settle to all those violations specified in
9 paragraph 5 above, occurring through (a) the date that compliance with all
10 effluent limitations is required, as specified in paragraph A(1) below, or (b)
11 the date upon which the Permit is presently scheduled to expire, whichever first
12 occurs.

13 8. This stipulated final order is not intended to settle any violation
14 of any effluent limitations set forth in paragraph 4 above. Furthermore, this
15 stipulated final order is not intended to limit, in any way, the Department's
16 right to proceed against Respondent in any forum for any past or future viola-
17 tion not expressly settled herein.

18 NOW THEREFORE, it is stipulated and agreed that:

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

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

21 (a) Submit proper and complete facility plan report and Step II
22 grant application by July 1, 1978.

23 (b) Submit complete and biddable final plans and specifications
24 and a proper and complete Step III grant application within
25 seven (7) months of Step II grant offer.

26 (c) Start construction within two (2) months of Step III grant offer.

- 1 (d) Submit a progress report within eleven (11) months of
2 Step III grant offer.
- 3 (e) Complete construction within twenty (20) months of Step
4 III grant offer.
- 5 (f) Demonstrate compliance with the final effluent limitations
6 specified in Schedule A of the Permit within 30 days of
7 completing construction.

8 (2) Requiring Respondent to meet the interim effluent limitations set forth
9 in paragraph 4 above until the date set in the schedule in paragraph A(1) above for
10 achieving compliance with the final effluent limitations.

11 (3) Requiring Respondent to comply with all the terms, schedules and conditions
12 of the Permit, except those modified by paragraph A(1) above.

13 (B) Regarding the violations set forth in paragraph 5 above, which are expressly
14 settled herein, the parties hereby waive any and all of their rights under United
15 States and Oregon Constitutions, statutes and administrative rules and regulations
16 to any and all notices, hearings, judicial review, and to service of a copy of the
17 final order herein;

18 (C) Respondent acknowledges that it has actual notice of the contents and
19 requirements of this stipulated and final order and that failure to fulfill any of
20 the requirements hereof would constitute a violation of this stipulated final order.
21 Therefore, should Respondent commit any violation of this stipulated final order,
22 Respondent hereby waives any rights it might then have to any and all ORS 468.125(1)
23 advance notices prior to the assessment of civil penalties for any and all such
24 violations. However, Respondent does not waive its rights to any and all ORS 468.135
25 (1) notices of assessment of civil penalty for any and all violations of this stip-
26 ulated final order.

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Date: SEP 15 1977 1977 .

By William H. Young
WILLIAM H. YOUNG
Director

RESPONDENT

Date: August 15, 1977 .

By Joyce C. Williams
Name:
Title:

FINAL ORDER

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

Date: SEP 28 1977 1977 .

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

WJQ - C. K. Ashbaker
File over permit
79929

Attachment No. 2

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

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

WHEREAS the Commission finds the facts to be as follows:

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

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

IT IS SO ORDERED:

ENVIRONMENTAL QUALITY COMMISSION

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

Date: DEC 20 1978



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

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

PT-S10-02-01

November 13, 1978

Dept. of Environmental Quality

RECEIVED
NOV 14 1978

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

NORTHWEST REGION

Dear Bob:

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

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

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

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

Sincerely,

STRAAM Engineers, Inc.

Leon J. Wilhelm, P.E.
Engineer

LJW:cag

cc: Steve Desmond
Burton Lowe

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

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

WHEREAS the Commission finds the facts to be as follows:

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

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

IT IS SO ORDERED:
ENVIRONMENTAL QUALITY COMMISSION

Date: FEB 23 1979

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



TRB

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

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

PT-S10-02-01

January 11, 1979

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

Dept. of Environmental Quality
RECEIVED
JAN 23 1979
NORTHWEST REGION

Dear Mr. Gildow:

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

Sincerely,

STRAAM Engineers, Inc.

Leon J. Wilhelm, P.E.
Engineer

Enclosure

cc: Robert Gilbert
Burton Lowe

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
JAN 15 1979
WATER QUALITY CONTROL

SCHEDULE TO COMPLETE SEASIDE FACILITIES PLAN
AND
STEP II GRANT APPLICATION

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JAN 15 1979

WATER QUALITY CONTROL

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

New rule adopted by the EQC on October 9, 1981.

OAR 340-41-034 Policy on Sewerage Works Planning and Construction

Oregon's publicly owned sewerage utilities have since 1956 developed an increasing reliance on federal sewerage works construction grant funds to meet a major portion of the cost of their sewerage works construction needs. This reliance did not appear unreasonable based on federal legislation passed up through 1978. Indeed, the Environmental Quality Commission (EQC) has routinely approved compliance schedules with deadlines contingent on federal funding. This reliance no longer appears reasonable based on recent and proposed legislative actions and appropriations and the general state of the nation's economy.

The federal funds expected for future years will address a small percentage of Oregon's sewerage works construction needs. Thus, continued reliance by DEQ and public agencies on federal funding for sewerage works construction will not assure that sewage from a growing Oregon population will be adequately treated and disposed of so that health hazards and nuisance conditions are prevented and beneficial uses of public waters are not threatened or impaired by quality degradation.

Therefore, the following statements of policy are established to guide future sewerage works planning and construction:

1. The EQC remains strongly committed to its historic program of preventing water quality problems by requiring control facilities to be provided prior to the connection of new or increased waste loads.
2. The EQC urges each sewerage utility in Oregon to develop, as soon as practicable, a financing plan which will assure that future sewerage works construction, operation, maintenance and replacement needs can be met in a timely manner. Such financing plans will be a prerequisite to Department issuance of permits for new or significantly modified sewerage facilities, for approval of plans for new or significantly modified sewerage facilities, or for access to funding assistance from the state pollution control bond fund. The Department may accept assurance of development of such financing plan if necessary to prevent delay in projects already planned and in the process of implementation. The Department will work with the League of Oregon Cities and others as necessary to aid in the development of financing plans.
3. No sewerage utility should assume that it will receive grant assistance to aid in addressing its planning and construction needs.

4. Existing sewerage facility plans which are awaiting design and construction should be updated where necessary to include:
 - a. Evaluation of additional alternatives where appropriate, and re-evaluation of costs of existing alternatives;
 - b. Identification and delineation of phased construction alternatives; and
 - c. A financing plan which will assure ability to construct facilities over an appropriate time span with locally derived funds.
5. New sewerage works facility planning initiated after Oct. 1, 1981 should not be approved without adequate consideration of alternatives and phased construction options, and without a financing plan which assures adequate funding for construction, operation, maintenance and replacement of sewerage facilities.
6. The EQC recognizes that many cities in need of immediate sewerage works construction have completed planning and are awaiting design or construction funding. These cities have developed their program relying on 75% federal grants. They will have difficulty developing and implementing alternatives to fund immediate construction needs. Many are, or will be, under moratoriums on new connections because existing facilities are at, or near, capacity. The EQC will consider the following interim measures as a means of assisting these cities to get on a self-supporting basis provided that an approvable long-range program is presented:
 - a. Temporary increases in waste discharge loading may be approved provided a minimum of secondary treatment, or equivalent control is maintained and beneficial uses of the receiving waterway are not impaired.
 - b. Installation and operation of temporary treatment works may be approved providing:
 - (i) The area served is inside an approved urban growth boundary and the proposal is consistent with State Land Use Planning laws.
 - (ii) A master sewerage plan is adopted which shows how and when the temporary facilities will be phased out.
 - (iii) The public agency responsible for implementing the master plan is the owner and operator of the temporary facilities.
 - (iv) Sewerage service to the area served by the temporary facility is necessary as part of the financing program

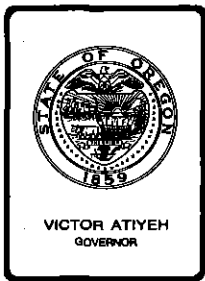
for master plan implementation and no other option for service is practicably available.

- (v) An acceptable receiving stream or method of effluent disposal is available for the temporary facility.

Compliance schedules and other permit requirements may be modified to incorporate an approved interim program. Compliance with a permit so modified will be required at all times.

7. Sewerage Construction programs should be designed to eliminate raw sewage bypassing during the summer recreation season (except for a storm event greater than the 1 in 10 year 24 hour storm) as soon as practicable. A program and timetable should be developed through negotiation with each affected source. Bypasses which occur during the remainder of the year should be eliminated in accordance with an approved longer term maintenance based correction program. More stringent schedules may be imposed as necessary to protect drinking water supplies and shellfish growing areas.
8. Any sewerage utility that is presently in compliance and foresees a need to plan for future expansion to accommodate growth but elects to wait for federal funds for planning and construction will make such election with full knowledge that if existing facilities reach capacity before new facilities are completed, a moratorium on new connections will be imposed. Such moratorium will not qualify them for any special consideration since its presence is deemed a matter of their choice.
9. The Department will continue to assist cities to develop interim and long-range programs, and construction schedules and to secure financing for essential construction.

HLS:g
WL1057.A (1)



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. J , January 22, 1982, EQC Meeting

Adoption of Amendments to Sulfur Content of Fuels,
Coal, Rule, OAR 340-22-020, to Limit Sulfur and
Volatile Content of Coal Used for Direct Residential Space
Heating

Background

The potential air quality impact from increased use of coal as a residential heating fuel has been evaluated by the Department. A committee of prominent health officials (including the State Health Officer and Multnomah County Health Officer) and the Portland Air Quality Advisory Committee, aided in this review. The general concensus of these groups was that preventative action to restrict coal as a residential heating fuel in problem airsheds was warranted in order to:

- 1) Avoid increased difficulty in attaining air quality standards,
- 2) Protect the public health against adverse health effects,
- 3) Avoid severe nuisance conditions including soiling, odors and visibility loss; and
- 4) Avoid substantial economic and social impacts that would occur if regulations were enacted after a significant problem and market had developed.

The Department opted to propose a clean coal rule in lieu of an outright ban on residential coal burning in order to provide an opportunity for the coal industry to manufacture a residential heating fuel which would not cause significant air quality problems in Oregon. At the October 9, 1981 Environmental Quality Commission meeting, a hearing was authorized for a proposed rule which would limit coal sold as a residential heating fuel in

the Portland, Salem, Eugene and Medford airsheds to a sulfur content of no more than 0.3% and to a volatile matter content of no more than 5%.

The hearings authorization report for the October 9, 1981 Environmental Quality Commission meeting (Attachment 1) discussed in detail the potential for increased use of coal in Oregon, the potential health effects and possible control alternatives. Notably mentioned in this report was the rapid increase of solid fuel heating appliances in the last few years in Oregon and the trend toward more restricted availability of firewood and the potential for greater availability of domestic coal. Also notably mentioned were air quality impact projections which indicated potential new violations of the state sulfur dioxide standard and increases in ambient sulfates and polycyclic organic matter (carcinogens) to levels considered unhealthy by members of the medical community.

Hearings Results and Evaluation

On November 17, 1981 a hearing was conducted in Portland on the proposed residential coal rule. The hearings officer report is contained in Attachment 2. In summary, 51 pieces of testimony have been received on the subject. A total of 28 pieces of testimony were in favor of the proposed rule. Of the 28, 14 were from organizations and 14 from individuals. A total of 23 pieces of testimony were opposed to the proposed rule. Of the 23, 7 were from organizations, 9 were from individuals who burned coal, and 7 were from individuals who apparently do not burn coal.

Organizations Favoring The Rule

Prominent among the 14 organizations who testified in favor of the rule were the Oregon State Health Division, Medford City Council, Associated Oregon Industries, Lane Council of Governments, League of Women Voters and numerous environmental oriented organizations. Generally, these organizations:

- 1) Praised DEQ for its foresight,
- 2) Characterized coal as a notoriously dirty residential heating fuel,
- 3) Felt health and aesthetics would be severely effected by increased residential coal burning,
- 4) Concluded industrial growth would have to be further limited to compensate for increased emissions from residential coal burning, and
- 5) Felt now is the time to regulate residential coal burning before major investments and life style changes occur which would be nearly impossible to reverse.

The Associated Oregon Industries believed it would be preferable to regulate the heating devices in lieu of the fuel but recognizing DEQ had no legislative authority to do so at this time felt that the proposed rule was the only way to deal with this potential problem at this time.

Individual Testimony Favoring Rule

The 14 individuals who spoke in favor of the proposed rule generally cited:

- 1) Previous personal bad experiences with air pollution from residential coal burning in other parts of the country, and
- 2) Present adverse impacts from neighbors burning wood and coal.

Many supported the allowance under the proposed rules for suppliers to produce an environmentally acceptable residential coal. One chimney sweep supported the rule as a means of preventing serious fire hazards from people burning coal in woodstoves which are not designed to withstand the extreme heat generated by coal burning.

Organization Testimony Against Rule

The 7 organizations testifying against the proposed rule generally were not in favor of regulation until a significant problem had occurred. The Federal Department of Energy expressed concern that the proposed rule:

- 1) May encourage more wood heat which could cause greater polycyclic organic matter (POM) (which are known carcinogens) than from burning coal, and
- 2) Would prevent use of anthracite coal which they consider a relatively clean burning fuel.

The Department and Health Advisory Committee did consider the POM impact of wood versus coal heating. The analysis showed that using the lowest values of POM emission factors, coal had a slightly less POM emission than wood. Using most probable and high range factors for hand fired devices, however, showed substantially more POM's from coal than from wood. Also a recent study by Harvard University has indicated greater health effects from bituminous coal burning than from wood. Finally, the substantially greater sulfur dioxide emissions and impact from coal versus wood were judged to far outweigh the concerns over slight differences in POM emissions.

In regard to anthracite coal, the Department recognizes that there are some varieties that have low volatile content (less than 10%) which can burn relatively smoke-free. Sulfur content of these coals is still relatively high (greater than .8 % sulfur); and using projections in the Health Committee report (contained in Attachment 1), burning such coal would be projected to threaten compliance with SO₂ air quality standards in Portland. There is a small amount of relatively low sulfur (less than .3%) western anthracite and bituminous coal which, if processed using available

technology, could meet the proposed 5% volatile content limit. The process would slightly increase the sulfur content (up to .5%). In order not to impose costly coal washing or other sulfur reducing techniques on this naturally occurring low sulfur coal to meet a strict .3% limit, the proposed rule could be modified to allow the limit to be measured on a preprocessed coal basis.

Individuals Testimony Against The Rule

The 9 individuals who burn coal and were opposed to the rule generally cited lower costs and convenience of burning coal and their belief they were not causing an air quality problem compared to those people burning wood. A few individuals cited a potential hardship in switching to another fuel and/or installing an alternative heating system.

The present use of coal (estimated at less than 1% of households) is admittedly not presently contributing to general airshed problems, although surprisingly DEQ has received some complaints about coal smoke. Imposing what at this point would be a ban on residential coal burning may be considered unjustifiably burdensome to some local residences. Individuals would, of course, have the right to apply for a variance under Oregon Administrative Rules. Another approach might be a blanket exemption for all existing coal burners. This would appear to have severe enforcement difficulties since coal is generally sold on a cash and carry basis and no receipts would be available to document who really qualified. Another approach would be an exemption upon application to those people who would certify that they have historically burned a specified minimum amount of coal in devices designed to burn this fuel. This would appear to be the most practical approach.

The 7 individuals who apparently don't burn coal but were opposed to the proposed rule, generally were opposed to any more government regulation and felt the analysis of the future air quality impacts of coal burning was inadequate.

Mr. K.J. Johnson raised several specific questions, including:

- 1) Why does DEQ feel new transshipment coal terminals will increase residential coal burning when the Port of Portland has stated several reasons why it wouldn't, and
- 2) What validity is there to portrayal of large pulp mill conversions to coal and if, in fact, there was validity, wouldn't the air quality impacts from them far outweigh those from residential coal burning?

While the Port of Portland indicated their contractual arrangements would generally make export coal unavailable to local markets, it is clear that major new export markets are going to substantially increase mining of coal in the west and perhaps even in Oregon and Washington. Some of this coal will be destined for domestic use including major industrial operations.

In Oregon, PGE's Boardman plant now burns coal as does Oregon Portland Cement plants at Lake Oswego and Durkee and Amalgamated Sugar at Nyssa and Kingsley Air Force Base in Klamath Falls. A permit has been issued for a wood/coal boiler to Harney County Electric at Burns and a permit application has been received from the Boise Cascade pulp and paper mill at St. Helens for a very large coal boiler. The Crown Zellerbach pulp and paper mill at Wauna also indicates intentions of pursuing a permit for a large coal conversion. DEQ believes it is reasonable to expect as the coal market, mining and general supply expand, there will be greater incentives for independent distributors to expand and penetrate the residential market. A very similar situation has been demonstrated in gasoline marketing where independent service stations proliferate as supply and demand increases.

Actual air emissions from major pulp mill coal conversions will be reviewed by the Department under DEQ's permit program to ensure no adverse impact will occur. Generally, with the available control technology and the fact that industrial coal conversions will likely replace 1.75% sulfur oil burning with 1% sulfur coal, there will be a net air quality benefit. Such was the case for particulate and sulfur dioxide emissions from a recently proposed Weyerhaeuser project at Longview, Washington.

Mr. G.R. Stroshane felt that Oregon had no potential of ever reaching severe air pollution conditions reached in the London smog of the '50s (when 4,000 excess deaths were attributed to residential coal burning). He also felt that sulfur in wood was something to be concerned about. Comparing the air pollution potential of Oregon communities with London is difficult because of lack of comparable and complete air quality monitoring information from the episodes in London. It is clear that western Oregon, notably the Medford area, has the highest meteorological potential for air pollution of anyplace in the U.S., being much higher than areas in the east. It is also recognized that severe air pollution episodes with associated mortality and morbidity have occurred in eastern U.S. areas like Donora, Pennsylvania in 1948. Therefore, the potential for severe air quality conditions in certain areas of Oregon from residential coal burning must be considered high. Sulfur dioxide emissions from coal are about 10 times those from wood on an equivalent heat basis, therefore, wood should not be considered significant in terms of sulfur dioxide impacts.

General Alternatives

The basic alternatives to consider in taking action on the proposed rule are as follows:

- 1) Adopt or not adopt a rule at this time. The Department believes the potential for significant increases in residential coal burning is real and that preventative action is warranted based on air quality impact projections and medical community projections of adverse effects. With some moderate resistance to the rule shown by existing coal burners, massive resistance and economic hardship would be expected if a large constituency of coal users was allowed to develop.

- 2) Exempt or not exempt existing coal users. The current variance process could be used to exempt existing coal users, however, this would take separate EQC action each time. A more simplified administrative process could be followed by providing a blanket exception in the rule which would require applicants to apply and certify they have burned a significant amount of coal in a stove designed to burn coal. Such a process would avoid exempting those individuals who may have or would burn a few supermarket packages of coal in their woodstove and expect to be exempted.
- 3) Adopt the proposed 0.3% sulfur and 5% volatile limit or modify it so naturally occurring low sulfur anthracite and bituminous coal could be easily processed to meet the regulation. Keeping the maximum amount of options open for using clean coal as any energy source is a well justified policy considering environment, economic and energy needs. Therefore, the proposed 0.3% sulfur limit should be applied to preprocessed coal to avoid additional sulfur removing costs.
- 4) Applying the regulation strictly to coal or applying the regulation to fuels blended with coal. There are some indications that fuel blends are being developed which contain coal. It seems justified to apply the same environmental restrictions to this fuel as to pure coal as the same air quality impacts would be expected.

Summation

1. Oregonians have demonstrated a significant shift towards solid fuel heating as exemplified by massive increases in wood space heating.
2. The potential exists for major increases in use of coal as a residential heating fuel considering:
 - 1) Wood is becoming more expensive and more difficult to obtain,
 - 2) Coal is becoming more attractive as a residential solid heating fuel considering its cost, availability, handling and burning characteristics,
 - 3) Coal shipments to Oregon will substantially increase in the near future as coal export terminals and industrial coal conversions are constructed,
 - 4) Manufacturers are rapidly tooling up to increase marketing of residential coal burning devices, and
 - 5) Present and future energy prices will continue to accelerate pressures towards increased residential solid fuel use.

3. Projected air quality impacts from residential coal burning indicate:
 - 1) Achieving and maintaining compliance with air quality standards would be difficult,
 - 2) Sulfur dioxide, sulfates and carcinogens would be increased in areas like Portland to a point considered unacceptable by local health experts,
 - 3) Nuisance conditions, such as smoke, odors, soiling and visibility loss would be greatly accentuated.
4. The Health Effects Review Committee and Portland Air Quality Advisory Committee recommend banning of residential coal use in urban areas. Waiting to regulate after a serious problem occurred was considered unwise by the committees on the grounds that adverse health effects should not be allowed to occur and significant economic hardship would result by regulating after a major market had developed.
5. The Department believes the most prudent approach to the residential coal burning issue is to take preventative control measures and develop a clean coal regulation based on a .3% sulfur, 5% volatile limit. While such coal is presently not available in this country, technology exists to meet these requirements.
6. A hearing was held on the proposed residential coal rule at which considerable support for the rule was shown and some objections stated.
7. Some of the stated objections to the proposed coal rule could be alleviated by:
 - a. Providing an exemption for existing coal burners, and
 - b. Making it easier for low sulfur western anthracite and bituminous coal to meet the rule by eliminating the desulfurization part of the coal cleaning process.
8. The proposed rule should apply to fuels made with coal additives since these fuels could also create similar environmental problems to the burning of pure coal.

Director's Recommendation

Based on the Summation, it is the Director's Recommendation that the proposed residential coal rule OAR 340-22-020 (Attachment A) be adopted with amendments as shown which would:

- 1) Provide a means for existing coal users to apply for an exemption,
- 2) Provide that the sulfur limit for devolatilized coal could be measured prior to devolatilization, and
- 3) Provide for application of the rule to fuels manufactured with coal as an additive.

William H. Young

Attachments: A. Proposed Amendments to OAR 340-22-020
1. October 29, 1981 EQC Report
2. November 17, 1981 Hearings Officer Report
3. Testimony for the November 17, 1981 EQC Meeting
(Copies Provided to EQC Only)

John Kowalczyk:a
AAD164.6 (1)
229-6459
December 17, 1981

PROPOSED RULES TO LIMIT THE SULFUR AND VOLATILE MATTER
OF COAL SOLD FOR DIRECT SPACE HEATING

340-22-020 (1) After July 1, 1972, no person shall sell, distribute, use, or make available for use, any coal containing greater than 1.0 percent sulfur by weight.

(2) Except as provided for in subsections (4) & (5) below, no person shall sell, distribute, use or make available for use, after July 1, 1983, any coal or coal containing fuel with greater than 0.3% sulfur and 5% volatile matter as defined in ASTM Method D3175 for direct space heating within the Portland, Salem, Eugene-Springfield, and Medford-Ashland Air Quality Maintenance Areas. For coals subjected to a devolatilization process, compliance with the sulfur limit may be demonstrated on the sulfur content of coal prior to the devolatilization process.

(3) Distributors of coal or coal containing fuel destined for direct residential space heating use shall keep records for a five year period which shall be available for DEQ inspection and which:

(a) specify quantities of coal or coal containing fuels sold,

(b) contain name and address of customers who are sold coal or coal containing fuels,

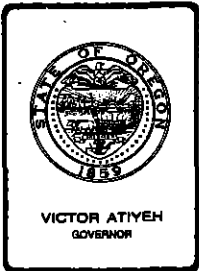
(c) specify the sulfur and volatile content of coal or the coal containing fuel sold to residences in the Portland, Salem, Eugene-Springfield, and Medford-Ashland Air Quality Maintenance Areas.

(4) Users of coal for direct residential space heating in 1980 who apply in writing by July 1, 1983 and receive written approval from the Department shall be exempted from the requirement of (2) above provided they certify that they:

(a) used more than one-half (1/2) ton of coal in 1980,

(b) used a heating device in 1980 specifically designed to burn coal.

(5) Distributors may sell coal not meeting specification in (2) above to those users who have applied for and received the exemption provided for in (4) above.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. F , October 9, 1981, EQC Meeting

Request for Authorization to Hold a Public Hearing to add Amendments to Sulfur Content of Fuels, Coal, Rule, 340-22-020, to Limit Sulfur & Volatile Content of Coal Used for Residential Space Heating

Background

The recent increase in use of wood as a residential heating fuel and the associated air quality impacts have led the Department to an in-depth study of the potential impact of similar increases in coal use. This matter has been researched by the Department for over 1 year, aided by the input of a Coal Health Effects Review Committee. This committee was composed of doctors and medical officials representing prominent national, state and local health agencies. The findings and recommendations of the Health Committee are contained in Attachment 1. The Portland Air Quality Advisory Committee also studied this issue and their recommendations are contained in Attachment 2. Both groups recommended banning use of coal as a residential heating fuel in problem airsheds.

Evaluation

The findings of the Health Committee and the Department may be summarized and evaluated as follows.

Coal Use Potential

- A. Coal is presently being imported to Oregon from western and eastern states and almost 1% of Oregon households now use it as a space heating stove fuel.
- B. The potential for much greater use of coal as a residential space heating fuel in Oregon exists considering:

B. Detailed projections of air quality impacts from various residential coal use scenarios were developed for the Health Effects Advisory Committee (Appendix 2 of Attachment 1) based on present 1% household coal use, a nominal 5% household use, and a 54% household use based on all projected wood heating households in 1987 converting to coal. The results, using the Portland airshed as a model, indicated:

- 1) Total particulate and SO₂ impacts due to plume downwash in neighboring property could substantially contribute to violation of national health standards.
- 2) Areas of existing high air pollution could experience unacceptable increases of total particulate, sulphur dioxides, sulfates and polycyclic organic matter in the middle to high range of projected coal use.
- 3) Significant increases in soiling, odors and visibility loss and other nuisance conditions would be expected to occur.

Health Effects

- A. Residential coal burning has been associated with the most severe air pollution episode in the world, the notable London "smog" of 1952.
- B. Although not posing nearly the threat to health as cigarette smoking, the Coal Health Effects Review Committee concluded that increased residential coal burning would: 1) hinder efforts to attain existing health standards; 2) cause acute lung symptoms for some citizens; 3) cause an unacceptable increase in polycyclic organic matter (potential carcinogens).
- C. The Health Effects Review Committee unanimously recommended that DEQ prohibit coal burning in residential urban areas, especially those experiencing poor ventilation. The Portland Air Quality Advisory Committee made a similar recommendation.

Control Alternatives

- A. Do nothing until problem actually becomes severe. This was considered unacceptable to the Committees' and the Department since it was considered preferable to prevent new air quality problems and to lessen the economic impact on small businesses and individuals by imposing regulations before major investments in equipment and marketing systems for residential coal use were developed.

residential coal burning devices; 5) present and future energy prices will continue to accelerate pressures towards increased residential solid fuel use.

3. Projected air quality impacts from residential coal burning indicate: 1) achieving and maintaining compliance with air quality standards would be more difficult; 2) sulphur dioxide, sulfates and carcinogens would be increased in areas like Portland to a point considered unacceptable by local health experts; 3) nuisance conditions such as smoke, odor, soiling and visibility loss would be greatly accentuated.
4. The Health Effects Review Committee and Portland Air Quality Advisory Committee recommended banning of residential coal use in urban areas. Waiting to regulate after a serious problem occurred was considered unwise by the Committees' on the grounds that adverse health effects should not be allowed to occur and significant economic hardship would result by regulating after a major market had been developed.
5. The Department believes the most prudent approach to the residential coal burning issue is to take preventative control measures and develop a clean coal regulation based on a 0.3% sulphur, 5% volatile content limit. While such coal is presently not available in this country, technology exists to meet these requirements. This technology might be applied if energy and economic conditions become more favorable toward residential coal use. Emissions from coal meeting these specifications would be in the same range as those of residential heating oil. Making such a rule effective by July 1, 1983 in air quality maintenance areas should allow those small number of existing coal users adequate time to develop alternative heating systems.

Director's Recommendations

Based on the Summation, it is recommended that EQC authorize a public hearing on the attached amendments to the Department's coal rule OAR 340-22-020 Attachment 4.

Bill

William H. Young

- Attachments:
1. Coal Health Effects Review Committee Report
 2. Portland Air Quality Advisory Recommendations
 3. Typical Journal Advertising/Articles On Coal Heating
 4. Proposed Amendment to OAR 340-22-020
 5. Statement of Need for Rulemaking
 6. Public Notice

JFK:a

AAD135.2 (1)

229-6459

9/10/81

ATTACHMENT 1

COAL HEALTH EFFECTS REVIEW COMMITTEE
SUMMARY REPORT
To The
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

April 21, 1981

Chairman: Dr. Max Bader

Members: Dr. John Aitchison
Ms. Frances Costikyan
Dr. Miles Edwards
Dr. Larry Foster
Dr. James F. Morris
Dr. Edward Press
Dr. Charles P. Schade
Prof. Trygve P. Steen

SUMMARY REPORT

TO THE

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

COAL HEALTH EFFECTS REVIEW COMMITTEE*

In October, 1980, the Committee was organized to examine and make recommendations on the risks to health of Oregonians which might result from coal combustion products in the ambient air due to increased coal use in home stoves. The Committee met on 9 occasions to review technical information supplied by its membership and by the Department of Environmental Quality (DEQ).

SUMMARY OF FINDINGS

GENERAL OVERVIEW

Specific recommendations of the Committee should be considered within the following context:

1. Contrary to the general perception of Oregon as an area with remarkably pure air, many parts of the state are more prone to atmospheric conditions (air stagnation) which can result in pollution build-up than many other parts of the world where serious problems have developed. These areas in Oregon include the Portland, Eugene-Springfield, and Medford-Ashland areas. The inhabitants in these regions are already subject to increased health risks due to air pollution. Therefore, these areas need to continue efforts to improve air quality.
2. Coal burning in hand-fired household stoves and fireplaces discharges sulfur dioxide, sulfates, particulates, and benzo(a)pyrene and other polycyclic organic material into the atmosphere. More residential coal burning would increase the concentration of these chemicals in the ambient air and result in their inhalation and deposition into the bronchi and the lungs, and for some materials, absorption and spread through the blood vessels.
3. Polluting agents in the air may interact to create a health hazard, even though taken individually they are not a hazard at a given concentration.
4. Time, dose, and host susceptibility factors are critical to the ability of agents to cause cancer and other illness. Young children are particularly vulnerable to low doses and because they are young,

*Membership of the Committee is presented in Appendix 1.

will be exposed over long periods of time. Even more than adults they should not be subjected unnecessarily to agents which may result in later development of disease.

5. Home stove and fireplace use increases the risk of fire and other safety problems.
6. Aesthetic factors, impaired visibility, acid rain, vegetation destruction, and odor affect the quality of life and can impact on health by affecting mental outlook, the food chain, and recreational activities.
7. Alternatives to burning coal in residential units are available. Large scale boilers or furnaces can burn coal much more efficiently than hand-fired units and reduce the formation rate of B(a)P and other POMs by several orders of magnitude, and with effective pollution control devices can reduce the release of other pollutants such as sulfur dioxide, sulfates, and particulates. Thus there is no reason to expose the general public unnecessarily to increased health risks which may result from increased residential coal burning.

SPECIFIC FINDINGS AND RECOMMENDATIONS

The committee recommends that residential coal burning should not be allowed in densely populated areas of Oregon with pollution problems. The basis for this recommendation is the Committee's concern for adverse health impacts from increased levels of sulfur dioxide, sulfates, total suspended particulates, and polycyclic organic materials. Projections of pollutant increases are presented in the DEQ report entitled "Range of Concentrations to be Analyzed as Part of the Assessment of Health Impacts Due to Residential Coal Burning," which is included in Appendix 2.

1. Sulfur Dioxide (SO₂) - The D.E.Q. 24-hour standard of 260 micrograms/cubic meter (ug/m³)* and the 60 ug/m³ annual standard should not be exceeded; levels as low as 100 ug/m³ for a 24-hour period can cause acute respiratory effects in some people. (1)

* Many pollutant concentrations are expressed in the form of micrograms, or one-millionth of a gram (454 grams = 1 pound), per cubic meter of air. The abbreviated notation which will be used throughout this report is ug/m³.

- (1) Stebbings, J., and C. Hayes. Panel Studies of acute health effects of air pollution. I. Cardiopulmonary symptoms in adults, New York, 1971-1972. Environ. Res. 11:89-111, 1976

2. Sulfates (SO₄) - The level should be kept below a 24-hour average of 15 ug/m³. Asthmatics and the elderly may develop respiratory symptoms at 24 hour average levels of 6-10 ug/m³.⁽²⁾ Long term exposure to the latter concentrations probably contributes to chronic lung disease.
3. Total Suspended Particulates (TSP) - The 24-hour standard of 150 ug/m³ and the annual standard of 60 ug/m³ should be maintained to avoid known and potential interactions with other agents in the air which adversely affect health. Particulates from residential coal burning may also create aesthetic problems by reducing visibility and depositing soot.
4. Benzo(a)pyrene (B(a)P) - This known cancer causing agent is an index for similar agents in the air. No exposure standard has been established. Coal burned in residential units is especially likely to be a major source of B(a)P.
5. Carbon Monoxide - Residential coal use, as a replacement for wood, would not significantly affect carbon monoxide concentrations which have been decreasing over the last five years.
6. Ozone - This is a summer problem that would not be affected by residential coal burning.
7. Nitrogen oxides - Residential coal burning produces about the same amount of nitrogen dioxide per BTU as residential oil or gas combustion and thus is not likely to cause any significant increases in concentrations.

ADDITIONAL RECOMMENDATIONS

1. Coal use in Oregon should be restricted to low sulfur and low ash content coals. Preferably, coal use should be limited to electricity generating plants and industrial users which employ adequate pollution controls.
2. D.E.Q. should undertake further B(a)P monitoring to update its information base for both indoor and outdoor B(a)P levels and for residential heating device emission rates.
3. D.E.Q. should encourage the public to increase energy conservation efforts and to stop cigarette smoking.

⁽²⁾ U.S.E.P.A., Position Paper on Regulation of Atmospheric Sulfates. Research Triangle Park. Publication Number EPA - 450/2-75-007. September, 1975.

COAL HEALTH EFFECTS REVIEW COMMITTEE

Introduction

Oregon may soon become a major western United States terminus for coal shipments to Asia. This may make coal much more available in this state. As a result, it may become a less expensive alternative to other fuels for home heating.

Stoves used for home heating generally do not burn coal cleanly. Use of coal for home heating in a significant number of urban homes could lead to substantial deterioration in air quality. This deterioration would be most serious in areas, such as Portland, Eugene, and Medford, where meteorologic inversions are common.

Among coal combustion products of concern to the Oregon department of Environmental Quality (DEQ) are total suspended particulates, sulfur dioxide, sulfates, carbon monoxide, ozone, nitrogen oxides, and benzo(a)pyrene and other polycyclic aromatic hydrocarbons. These agents can harm both the liveability of an area and the health of people living there.

To help the Environmental Quality Commission reach its determination on what, if anything, should be done to regulate coal usage in Oregon, D.E.Q. formed a Coal Health Effects Review Committee. The Committee's task was to define the known and potential health effects which might result from acute and long-term exposure to these coal combustion products in the

ambient air. The committee considered health effects of different concentrations of coal combustion products upon both healthy people and "high risk" groups including the very young, the elderly, asthmatics and others with very vulnerable lungs, and persons with underlying diseases such as chronic bronchitis and emphysema. The Committee's findings are provided in this report along with several suggestions which it feels deserve consideration.

Overview

The Coal Health Effects Review Committee provides the following general context for its specific findings concerning the known and potential health effects of those air quality factors which it has reviewed. First, it is important for the citizens of Oregon to recognize that many parts of the State are just as prone, if not more prone, to adverse atmospheric conditions that can result in pollution build-up as others areas of the world which have suffered serious pollution problems. Among areas which are already subject to increased risks to health from air pollution during their frequent meteorologic inversions, are Portland, Eugene, and Medford. Air quality in those areas still needs to be improved and must not be permitted to decrease significantly without a most compelling justification. The Committee is aware of no such justification. The

Committee believes that even in a severe national energy shortage, there are preferable alternatives to burning coal in individual dwellings. One alternative is use of coal in large industrial boilers which can burn it more cleanly and control the emissions more efficiently. Gas and oil fuels used by those mid-range industrial boilers could then be diverted to residential heating usage. Another option, given construction time, is burning the coal in large heat and electricity generating plants, where polluting emissions can also be much more effectively controlled. Home coal use is clearly not necessary to serve as an energy source for heating during short term crisis situations such as those which may follow ice storms.

Second, the Committee underscores the need to recognize that there may be interaction between polluting chemicals in the air which may either increase or reduce their effects on health. For example, airborne particulates significantly increase the adverse health impacts of both sulfur oxides and polycyclic organic materials. Although all interactions are not fully understood the Committee considers it prudent to take a conservative approach to protecting human health.

Third, the Committee has considered the present biologic controversy over whether a threshold exposure to an agent must be exceeded for it to cause cancer or other illnesses. Although no clear answers exist to the threshold question, time-dose-host susceptibility factors all affect the ability of agents to cause disease. Young children are the most susceptible to eventually developing chronic illness due to air pollution, because they are likely to be exposed to low doses acting over very long periods of time and because of their vulnerability to lung damage during growth and development of the respiratory system. Therefore, common sense suggests avoidance of unnecessary build-up of air pollutants which, in higher concentrations, are known to affect health, and which at low doses clearly affect aesthetic qualities, if not health. In that context the threshold question becomes largely academic.

The effects of agents which cause cancer and chronic obstructive pulmonary disease are cumulative. Therefore, if prolonged (over 1 year) excessive levels of air pollutants are forecast, a long term strategy aimed at keeping pollutant concentrations down to acceptable levels is essential. However, the Committee does not wish to preclude the option of using low sulfur coal in areas where allowing that freedom of choice will not significantly affect air quality that already meets State standards.

Finally, the Committee wishes to call attention to fire, safety, and aesthetics issues which it has not specifically addressed. Increased residential use of stoves and fireplaces which are fueled by wood or coal significantly raises the risk of fire in those homes, a risk to health which is probably greater than that from carcinogens in the air. In addition, as homes are sealed tighter for weatherization, the hazard of carbon monoxide poisoning and other indoor air pollution increases. Also, aesthetic factors, impaired visibility, effects of acid rain, destruction of vegetation, and odors can affect health indirectly.

The Committee wishes that it could base all of its specific findings and recommendations on solid, irrefutable facts. In environmental health, this is often not possible and best judgments must therefore be made. The Committee's findings with respect to sulfur dioxide have extensive support in the medical literature. Its findings concerning benzo(a)pyrene and similar agents are substantially based upon deductive reasoning using studies reported in the medical literature that were not specifically related to the problem at hand. Nevertheless, the lack of better information is not justification for ignoring that which is available. The additional information would merely be helpful in establishing more precise limits.

FINDINGS AND RECOMMENDATIONS

I. Findings and Recommendations Regarding Specific Pollutants

Total Suspended Particulates -- TSP are a mixture of manmade and natural materials that contain silicon, sulfur, nitrogen, carbon, and lead and vary from area to area. Particulates with a diameter less than 10 micrometers will enter the lower airways of the lungs. (3,4) TSP represents an index of pollution rather than a specific pollutant. Twenty-four hour concentrations are usually safe below 150 ug/m³ for the general population.

The committee endorses the Oregon particulate standards of 150 ug/m³ on a 24-hour basis and 60 ug/m³ on an annual basis and urges DEQ to continue in its attempts to attain and maintain TSP standards. The committee notes that although the relative amounts of particulates as expressed as mass per BTU of wood or coal burned are approximately the same, particulates resulting from residential coal combustion can be expected to be more hazardous to health due to much higher levels of benzo(a)pyrene, sulfur dioxide, sulfates and heavy metals such as mercury. Since the Portland, Medford/Ashland, and Eugene/Springfield areas already exceed particulate standards, the introduction into these airsheds of an additional source of harmful particulates would make future efforts to attain standards even more difficult.

Sulfur Dioxide - Standards are difficult to establish because of the complex chemistry of sulfur oxides (SO₂) and the variability of human response to them. SO₂ can be transformed into other forms such as particulate aerosols which may be biologically more damaging than SO₂. Thus like TSP, SO₂ levels serve as indices of pollution.

(3) International Radiological Protection Commission, Deposition and Retention Models for Internal Dosimetry of the Human Respiratory Tract, Task Group on Lung Dynamics. Health Physics 12:173-207, 1966.

(4) Stuart, Bruce O., Deposition and Clearance of Inhaled Particulates. Environmental Health Perspectives 16:46, 1976.

The committee recommends that the present Oregon SO₂ standards of 260 ug/m³ over a 24 hour period and 60 ug/m³ annual average be maintained. Because exposure to SO₂ causes adverse physiological effects to the respiratory system and impairs ventilation at levels as low as 100 ug/m³,⁽⁵⁾ the DEQ is encouraged to take preventive actions to ensure that the 24-hour Oregon SO₂ standard is not exceeded even during episodic conditions.

Twenty-four hour SO₂ concentrations in the Portland area already exceed 200 ug/m³ on some peak days. The increased SO₂ concentrations which could occur with heavy coal burning or from internal smoke leaks or downwash conditions (from an individual unit) combined with already existing ambient levels on peak days would cause acute lung symptoms for some citizens whose airways are especially sensitive to SO₂.

Sulfates - The Committee recommends that DEQ should attempt to manage the airshed such that peak 24-hour SO₄ concentrations are maintained below 15 ug/m³. The Committee adopts this position with the knowledge that there is currently no Oregon or Federal SO₄ standard, and on the basis that some adverse health effects have been observed to occur at concentrations below 15 ug/m³. For example, effects on the elderly have been reported at 24-hour concentrations of 8-10 ug/m³ and effects on asthmatics at 6-10 ug/m³.⁽⁶⁾ The Portland area already experiences winter monthly average sulfate concentrations of 7 ug/m³; sulfates from residential coal burning would be concentrated in populated areas.

Carbon Monoxide - The amount of carbon monoxide (CO) which would enter the atmosphere is about the same whether coal or wood is burned. CO levels have been decreasing despite increased wood usage in recent years. Thus, carbon monoxide is not considered to be a problem affected by coal use in residences.

Ozone - This is a summer pollutant problem which would not be affected by residential coal use.

Nitrogen oxides - Residential coal burning produces about the same amount of nitrogen dioxide (NO₂) per BTU as residential oil or gas combustion and thus is not likely to cause any significant increases in NO₂ concentrations.

⁽⁵⁾ Stebbings, J., and C. Hayes. Panel Studies of acute health effects of air pollution. I. Cardiopulmonary symptoms in adults, New York, 1971-1972. Environ. Res. 11:89-111, 1976.

⁽⁶⁾ EPA Position Paper on Atmospheric Sulfates. 1975. (See Footnote 2.)

Benzo(a)pyrene and Polycyclic Organic Materials - Polycyclic organic matter (POM) includes benzo(a)pyrene (B(a)P) and other polycyclic aromatic hydrocarbons. B(a)P is an indicator, or marker for the presence of POM in air. B(a)P, as well as some other polycyclic aromatic hydrocarbons included in POM, act as initiating agents for cancer in animals⁽⁷⁾ and man.⁽⁸⁾

In the late 1960's, annual average concentrations of B(a)P generally ranged from 2.3 to 4.8 nanograms/cubic meter (ng/m^3)* in Portland, Eugene, and Medford.⁽⁹⁾ A high value of $8.2 \text{ ng}/\text{m}^3$ B(a)P was recorded in Medford in 1968. Although annual average B(a)P concentration data are not available in Oregon after 1970, nationally the average of 28 urban sites for which such data are available (including some Pacific Northwest locations, i.e. Seattle) dropped from $2.4 \text{ ng}/\text{m}^3$ to $.6 \text{ ng}/\text{m}^3$ between 1970 and 1976.⁽¹⁰⁾ Current levels in Oregon are not known but there is evidence^(11,12) to suggest B(a)P concentrations have climbed since 1976 and that they may be as high as or higher

* Concentrations of benzo(a)pyrene are commonly expressed in units of nanograms per cubic meter (ng/m^3) or one-billionth of a gram per cubic meter.

- (7) Health Assessment Document for Polycyclic Organic Matter. U.S. Environmental Protection Agency. Research Triangle Park, North Carolina. Publication No. EPA-600/9-79-008. Pages 6-85 to 6-133, 1979.
- (8) Health Assessment Document for Polycyclic Organic Matter. Pages 6-186 to 6-220. 1979. (See Footnote 7.)
- (9) Scientific and Technical Assessment Report on Particulate Polycyclic Organic Matter (PPOM). U.S. Environmental Protection Agency. Washington, D.C. Publication No. EPA-600/6-75-001. 1975. In: Health Assessment Document for Polycyclic Organic Matter, pages 5-9, 1979.
- (10) Health Assessment Document for Polycyclic Organic Materials. Pages 5-13 to 5-14. 1979. (See Footnote 7.)
- (11) Nilsson, Jan, Combustion of Wood/Environmental Restrictions in Sweden. National Swedish Environmental Protection Board. February, 1980. The report states that typical B(a)P levels within 30 meters of a wood stove are $10\text{-}20 \text{ ng}/\text{m}^3$.
- (12) Fajer, Mike, Summary of Medford Historical Benzene-Soluble Organic Data, Oregon Department of Environmental Quality, 5-13-80. Data shows a 102% increase in annual average Medford levels of benzene-soluble organics between 1971 and 1979.

than 1968 levels due to significant increases in residential woodburning. If the medium projected level of residential coal burning were to occur in the Portland airshed, the annual average B(a)P air concentration would increase by 3.9 ng/m³ in the highest concentration 2x2 kilometer grid in which 9,000 people reside* (see Appendix 2). Where residences are close together and because of local downdraft conditions or indoor smoke leaks, concentrations could be much higher.

The Committee cannot predict precisely what health impacts would result from B(a)P and other POMs introduced by increased residential coal burning. The Committee recognizes the complexity of analyzing environmental causes of cancer and dose response factors.⁽¹³⁾ The absence of an association of lung cancer with past levels of B(a)P and POMs may be due to masking of their effects by the much larger effect of cigarette smoking. However, it is known that persons who smoke a few cigarettes daily, each of which may result in B(a)P exposure equivalent to an annual average exposure of .67 ng/m³ of B(a)P⁽¹⁴⁾ (as well as other cancer causing agents) experience higher lung cancer rates than non-smokers. People exposed to annual average B(a)P levels of 3.9 ng/m³ would be exposed to the same amount of B(a)P as individuals smoking 6 cigarettes per day. This raises the concern that a carcinogenic effect might occur from the residential coal burning; however, because other POM's and their interactions may be different for cigarette smoking and residential coal burning, and because the POM levels actually reaching lung tissue may be different, it is probable that equivalent dosages of B(a)P from cigarette smoking and residential coal burning would not result in a cancer-causing effect to the same degree.

The Committee, recognizing that no national exposure standard has been established for B(a)P and POMs despite their known cancer causing capabilities, therefore recommends that B(a)P in the ambient air not be permitted to increase above current levels.

(13) Maclure, K.M. and MacMahan, G: An epidemiologic perspective of environmental carcinogenesis. In: Epidemiologic Reviews. Sartwell, P.E. and Nathanson, N. (ed.) 2:12-48 Johns Hopkins Univ. Press. Baltimore, MD. 1980.

(14) Bridbord, K. et al., Human Exposure to Polynuclear Aromatic Hydrocarbons. In: Carcinogenesis, Vol. 1. R. I. Freudenthal and P. W. Jones (ed.), Raven Press, New York, 1976.

*The 260,000 people in the densest 50 square miles of the region would be exposed to average additional levels of 2.5 ng/m³ of B(a)P from this amount of coal burning.

II. Recommendations for Action Regarding Coal Burning

1. DEQ should restrict coal use in Oregon to the lowest sulfur content coals on a B.T.U. basis. Low ash coal is also desirable.
2. DEQ should prohibit coal burning in individual dwellings in all urban areas of Oregon and additionally in those areas where stagnant air is common. The preferred use of coal is in large industrial boilers and relatively clean burning, coal-fired plants which generate electrical power and can be located outside of areas that are subject to serious air pollution e.g., Boardman. Such energy sources can be equipped with adequate pollution controls and when combined with use of existing fuels, heat pumps, solar power and wind power should obviate most, if not all, need to use coal in home stoves and fireplaces.

GENERAL AIR POLLUTION SUGGESTIONS

1. DEQ should encourage increased energy conservation efforts by the general public and industry in order to lessen future reliance for energy upon fuels which pollute the air.
2. DEQ should recognize that the long-term health effects of cigarette smoking are of far greater significance than home stove and fireplace coal burning under most foreseeable scenarios. Consequently, in its public pronouncements on air quality, DEQ would be well advised to encourage people to stop smoking whenever the opportunity presents itself.
3. The DEQ should undertake additional measurements of indoor and outdoor B(a)P levels. These recommendations should not be interpreted as a statement by the Committee that no action on residential coal burning is justifiable until such additional information has been gathered. Rather the Committee urges that DEQ attempt to improve its information base on likely and potential future B(a)P levels such that health effects from such compounds may be better understood in the future.
 - a. DEQ should undertake emission factor studies to determine whether the mid-range B(a)P emission factors it has provided to the Committee are realistic.
 - b. DEQ should undertake representative periodic ambient air B(a)P monitoring to help determine whether potential coal-related increase in B(a)P emissions would raise ambient levels to concentrations of concern.
 - c. DEQ should attempt to verify whether its estimates of B(a)P concentrations from down wash situations or internal smoke leaks are realistic in order to help determine whether these situations pose a risk to health. This can be done by either DEQ source testing or by reviewing monitoring work being done by other researchers.

APPENDIX 1

Membership of
COAL HEALTH EFFECTS REVIEW COMMITTEE

Dr. John Aitchison
Chief, Toxicology Section
Department of Clinical Pathology
University of Oregon Health Sciences Center

Dr. Max Bader (Chairman: Coal Health Effects Review Committee)
Oregon State Health Officer
Oregon State Health Division

Ms. Frances Costikyan
Executive Director
Oregon Lung Association

Dr. Miles Edwards
Head, Division of Chest Diseases
Department of Medicine
University of Oregon Health Sciences Center

Dr. Larry Foster
Communicable Disease Control Officer
and Assistant State Epidemiologist
Oregon State Health Division

Dr. James F. Morris
Chief, Pulmonary Disease Section
Portland Veterans Administration Medical Center

Dr. William Morton
Head, Division of Environmental Medicine
University of Oregon Health Sciences Center

Dr. Edward Press (Retired Oregon State Health Officer)
Chairman, Public Health Committee
Oregon Medical Association

Dr. Charles P. Schade
Multnomah County Health Officer
Multnomah County

Mr. William Shafer
American Cancer Society

Prof. Trygve P. Steen, M.P.H., Ph.D
Department of Biology
Portland State University

The Coal Health Effects Review Committee was initially formed by DEQ. Members with specific expertise were added upon suggestion. Members representing specific interest groups gave their personal opinions which are reflected in the policy recommendations. Although the report did not receive formal clearance or approval to date by the governing bodies of the organizations represented, the individuals involved did attempt to forward the position of the organization they represented to the best of their ability.

April 14, 1981

AR850.1 (2)

RANGE OF CONCENTRATIONS TO BE ANALYZED AS PART OF THE ASSESSMENT
OF HEALTH IMPACTS DUE TO RESIDENTIAL COAL BURNING**

The low, intermediate, and high estimates of concentrations were derived via different emission factors and assumptions about residential coal usages rates. The basis for these calculations are presented in explanatory footnotes on pages 9 through 11.

I. 24-Hour Impacts Summary

	Highest Grid* 24-Hour Ambient Concentrations [†] ug/m ³	24-Hour Concentrations Due to Downwash [†] ug/m ³	24-Hour Concentrations Due to Indoor [†] Smoke Leaks ug/m ³
TSP			
Low	.08	3.1	.4
Intermediate	2.0	26.4	3.0
High	73.6	85.8	9.7
SO₂			
Low	.6	40.	6.4
Intermediate	5.9	126.	20.2
High	110.	251.	40.4
SO₄			
Low	.04	N.E. ***	N.E. ***
Intermediate	.72	N.E.	N.E.
High	33.	N.E.	N.E.
B(a)P			
	<u>ng/m³</u>	<u>ng/m³</u>	<u>ng/m³</u>
Low	-.06	-3.8	.55
Intermediate	22.2	467	55
High	2158.	4957	1034

* These values represent concentrations in the highest 2 x 2 kilometer grid in the DEQ's Portland area modelling network.

** Values have been adjusted to account for reduced wood impacts when coal replaces wood.

*** Not estimable because it is not known how much sulfur dioxide converts to sulfates in very short time periods.

[†] Concentrations are additive and do not include background or other impacts from sources other than residential coal burning. Downwash and smoke leak impacts are attributable to an individual unit. Ambient impacts represent the impact of dispersed emissions from multiple sources.

NOTE: For Comparison, Oregon and Federal Ambient Air Quality Standards and Portland Area Levels are Shown in Appendix A.

Oregon Department of
Environmental Quality
William T. Greene
April, 1981

II. Annual Impacts Summary

	Highest Grid* Annual Ambient Concentrations ⁺ ug/m ³	Annual Concentrations Due to Downwash ⁺ ug/m ³	Annual Concentrations Due to Indoor ⁺ Smoke Leaks ug/m ³
TSP			
Low	.01	.27	.13
Intermediate	.34	2.2	1.0
High	12.9	7.2	3.2
SO₂			
Low	.1	3.3	2.1
Intermediate	1.0	10.5	6.7
High	19.2	20.9	13.3
SO₄			
Low	.006	N.E. ***	N.E. ***
Intermediate	.13	N.E.	N.E.
High	5.8	N.E.	N.E.
B(a)P			
	<u>ng/m³</u>	<u>ng/m³</u>	<u>ng/m³</u>
Low	-.01	-.3	.18
Intermediate	3.9	38.9	18
High	376	413	345

* These values represent concentrations in the highest 2 x 2 kilometer grid in the DEQ's Portland area modelling network.

** Values have been adjusted to account for reduced wood impacts when coal replaces wood.

*** Not estimable because it is not known how much sulfur dioxide converts to sulfates in very short time periods.

⁺ Concentrations are additive and do not include background or other impacts from sources other than residential coal burning. Downwash and smoke leak impacts are attributable to an individual unit. Ambient impacts represent the impact of dispersed emissions from multiple sources.

NOTE: For Comparison, Oregon and Federal Ambient Air Quality Standards and Portland Area Levels are Shown in Appendix A.

III. AMBIENT IMPACTS

	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Footnote</u>
<u>TSP</u>				
Coal Usage	4,000 T/yr	40,000 T/yr	740,000 T/yr	1.
Emission Factors	5.3 lb/ton	12.6 lb/ton	25.4 lb/ton	2.
Annual Tons Emissions	45 T/yr	592 T/yr	15,320 T/yr	
<u>24-Hour Maximum</u>				
<u>Impacts in Micrograms/Cubic Meter</u>				
<u>TSP Impacts</u>				
- Highest grid	.08	2.0	73.6	3.
- Densest 50 sq. mi.	.05	1.1	42.9	3.
- Region	.01	.3	12.9	3.
<u>Annual TSP Impacts</u>				
- Highest grid	.01	.34	12.9	3.
- Densest 50 sq. mi.	.01	.22	8.3	3.
- Region	.005	.09	3.4	3
<u>SO₂ Impacts</u>				
Coal Usage	4,000 T/yr	40,000 T/yr	740,000 T/yr	1
Emission Factors	38 lb/ton	38 lb/ton	38 lb/ton	4.
Annual Tons Emissions	76 T/yr	760 T/yr	14,060 T/yr	
<u>24-Hour Maximum</u>				
<u>Impacts in Micrograms/Cubic Meter</u>				
<u>Impacts</u>				
- Highest grid	.59	5.9	110.	3.
- Densest 50 sq. mi.	.35	3.5	64.	3.
- Region	.1	1.0	19.2	3.
<u>Annual Impacts</u>				
Highest grid	.1	1.0	19.2	3.
- Densest 50 sq. mi.	.07	.7	12.4	3.
- Region	.03	.3	5.1	3.

	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Footnote</u>
<u>SO₄ Impacts</u>				
Coal Usage	4,000 T/yr	40,000 T/yr	740,000 T/yr	
Emission Factors	2.3	4.6	11.4	4., 5.
Annual Tons Emissions	4.6	92	4218	
24-Hour Maximum	<u>Impacts in Micrograms/Cubic Meter</u>			
<u>Impacts</u>				
- Highest grid	.04	.72	33	3.
- Densest 50 sq. mi.	.02	.42	19	3.
- Region	.006	.13	5.8	3.
<u>Annual Impacts</u>				
- Highest Grid	.006	.13	5.8	3.
- Densest 50 sq. mi.	.004	.08	3.7	3.
- Region	.002	.03	1.5	3.
<u>B(a)P Impacts</u>				
Coal Usage	4,000 T/yr	40,000 T/yr	740,000 T/yr	
Emission Factors	-.061 g/10 ⁶ BTU	2.365 g/10 ⁶ BTU	12.56 g/10 ⁶ BTU	6.
Annual Tons Emissions	.009 T/yr	3.0 T/yr	279 T/yr	7.
24-Hour Maximum	<u>Impacts in Nanograms/Cubic Meter</u> *			
<u>Impacts</u>				
- Highest grid	-.06	22.2	2158	3.
- Densest 50 sq. mi.	-.03	12.9	1255	3.
- Region	-.01	3.9	376	3.
<u>Annual Impacts</u>				
- Highest grid	-.008	3.9	376	3.
- Densest 50 sq. mi.	-.007	2.5	243	3.
- Region	-.002	1.0	100	3.

* A nanogram is one billionth of a gram.

IV. IMPACTS ON HOUSEHOLDS DUE TO DOWNWASH

This analysis calculates plume impacts on adjacent houses due to downwash conditions, and assumes that the indoor concentrations equal one-half of the concentrations on the outside wall of a house.

	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Footnote</u>
<u>TSP Downwash Impacts</u>				
Coal Usage	7 lb/day	22 lb/day	44 lb/day	
TSP Emission Factor	3 lb/ton	8 lb/ton	13 lb/ton	6.
Twelve-Hour Emission Rate	1.1×10^{-4} g/sec	9.22×10^{-4} g/sec	3.0×10^{-3} g/sec	7.
24-Hour Impact on Adjacent House 10 meters Downwind Due to Downwash	3.1 ug/m ³	26.4 ug/m ³	85.8 ug/m ³	8.
Annual Impact on Adjacent House 10 meters Downwind Due to Downwash	.27 ug/m ³	2.2 ug/m ³	7.2 ug/m ³	9.
<u>SO₂ Downwash Impacts</u>				
Coal Usage	7 lb/day	22 lb/day	44 lb/day	
SO ₂ Emission Factor	38 lb/ton	38 lb/ton	38/lb ton	10.
Twelve-Hour Emission Rate	1.4×10^{-3} g/sec	4.39×10^{-3} g/sec	8.78×10^{-3} g/sec	7.
24-Hour Impact on Adjacent House 10 Meters Downwind Due to Downwash	40 ug/m ³	126 ug/m ³	251 ug/m ³	8.
Annual Impact on Adjacent House 10 Meters Downwind Due to Downwash	3.3 ug/m ³	10.5 ug/m ³	20.9 ug/m ³	9.

	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Footnote</u>
<u>Benzo(a) Pyrene Downwash Impacts</u>				
Daily Coal Usage	7 lb	22 lb	44 lb	
B(a)P Emission Factor	-0.061 g/10 ⁶ BTU	2.365 g/10 ⁶ BTU	12.56 g/10 ⁶ BTU	11.
Twelve-Hour Emission Rate	-1.33x10 ⁻⁷ g/sec	1.63x10 ⁻⁵ g/sec	1.73x10 ⁻⁴ g/sec	7.
24-Hour Impact on adjacent House 20 meters downwind due to downwash	-3.8 ng/m ³	467 ng/m ³	4957 ng/m ³	8.
Indoor = 50% outside Wall Impacts				
Annual Impact on Adjacent House 20 Meters Downwind Due to Downwash	-.3 ng/m ³	38.9 ng/m ³	413 ng/m ³	9.

V. Impacts on Households Due to Internal Smoke Leaks

Benzo(a)Pyrene Indoor Smoke Leak Impacts

	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Footnote</u>
Known B(a)P Concentrations due to Wood-burning Fireplaces	1 ng/m ³	3 ng/m ³	11 ng/m ³	12.
Assumed 24-Hour Concentration due to Fireplaces	.33 ng/m ³	1 ng/m ³	3.67 ng/m ³	13.
Multiplier by Which Coal B(a)P Emission Rate Exceeds Fireplace B(a)P Emission Rate from Wood	1.67	55	282	14.
Assumed 24-Hour Indoor B(a)P Concentrations Due to Smoke Leaks from Residential Coal Burning.	.55 ng/m ³	55 ng/m ³	1034 ng/m ³	15.
24-Hour Indoor B(a)P Concentrations from Smoke Leaks Less Reduced Wood Impacts	.22 ng/m ³	54 ng/m ³	1030 ng/m ³	16.
Assumed Annual Average B(a)P Levels From Smoke Leaks	.09 ng/m ³	14 ng/m ³	257 ng/m ³	

	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Footnote</u>
<u>TSP Indoor Smoke Leak Impacts</u>				
Coal Usage	7 lb/day	22 lb/day	44 lb/day	6.
TSP Emission Factor	3 lb/ton	8 lb/ton	13 lb/ton	6.
Emission Rate in Grams/10 ⁶ BTU	50.4 g/10 ⁶ BTU	134.5 g/10 ⁶ BTU	218.6 g/10 ⁶ BTU	7.
Multiplier by Which Coal TSP Emission Rate Exceeds Fire- place B(a)P Emission Rate from Wood	1120	2990	4860	6.,18.
Assumed 24-Hour Indoor TSP Concen- trations due to Smoke Leaks From Burning Coal	.36 ug/m ³	3.0 ug/m ³	9.7 ug/m ³	19.
Assumed Annual Indoor TSP Concen- trations due to Smoke Leaks From Coal Burning	.12 ug/m ³	1.0 ug/m ³	3.2 ug/m ³	20.
<u>SO₂ Indoor Smoke Leak Impacts</u>				
Coal Usage	7 lb/day	22 lb/day	44 lb/day	
SO ₂	38 lb/ton	38 lb/ton	38 lb/ton	10.
Multiplier by Which Coal SO ₂ Emission Rate Exceeds Fireplace B(a)P Emission Rate from Wood	20180	20180	20180	6.,11.
Assumed 24-Hour Indoor SO ₂ Con- centrations Due to Smoke Leaks from Burning Coal	6.4 ug/m ³	20.2 ug/m ³	40.4 ug/m ³	21.
Assumed Annual Indoor SO ₂ Concen- trations Due to Smoke Leaks from Coal Burning	2.1 ug/m ³	6.7 ug/m ³	13.5 ug/m ³	20.

FOOTNOTES:

1. If 1% of households burn 1 ton/year, annual tons of coal are 4000. With 5% burning 2 T/yr, the rate is 40,000. As an upper limit value, if all households projected to burn wood in 1987 burned the equivalent amount of coal, 740,000 tons/year would be burned.
2. EPA's emission factor (Compilation of Air Pollutant Emission Factors, U.S.E.P.A., 1975) is 20 lb/ton direct TSP for hand-fired stoves and 30 lb/ton for fireplaces. Thus 3 values of 20, 25 and 30 were assumed for direct particulate. Secondary sulfates must be added. Since the SO₂ emission factor is 38 lb/ton for 1% sulfur coal, the sulfate would range from 2.3 lb/ton to 4.6 lb/ton to 11.4 lb/ton if it is assumed that either 4%, 8%, or 20% is converted in the atmosphere to sulfates. The 8% conversion factor is the mean value derived from the PACS study, and observed sulfate concentrations.

Example:

$$\frac{38 \text{ lb SO}_2}{\text{ton}} \times .08 \text{ Conversion of SO}_2 \text{ to SO}_4 \times \frac{1.5 \text{ wt SO}_4}{\text{wt SO}_2} = 4.6 \text{ lb SO}_4/\text{ton coal}$$

<u>Low</u>	<u>Medium</u>	<u>High</u>
20	25	30
<u>2.3</u>	<u>4.6</u>	<u>11.4</u>
22.3	29.6	41.4

These values must be discounted by 17 lb/ton (AP-42) to account for wood burning TSP emissions reduced by wood replacement with coal.

3. The DEQ's 1980 computer modelling work on particulates provides information on what the daily and annual impacts of 11,000 tons of wood burning emissions would be for different areas. This data is shown below. The impact on other emission sources that have a geographical distribution similar to population or households can be calculated by scaling.

	<u>Daily Maximum Impact of 11,000 annual Tons of Residential Wood Burning Emissions in 1987</u>	<u>Annual Average Impact of 11,000 tons of Residential Wood Burning Emissions in 1987</u>
Highest grid (9,000 people)	86 ug/m ³	15 ug/m ³
Worst 50 sq. mi. (260,000 people)	50	9.7
Region (800,000 people)	15	4.

4. A 1% sulfur coal has been assumed for all cases. Wood SO₂ emissions are only 1% of the coal SO₂ emissions and have therefore been neglected.
5. As discussed in Footnote 2, this assumes either 4% or 8% or 20% of SO₂ converts to SO₄ within the region. The 8% value is the best estimate.
6. The three coal emission factors cited in Footnote 2. of 20, 25, and 30 lb/ton were reduced by the wood emission factor of 17 lb/ton to account for reduced wood burning impacts if wood replaces coal. Sulfate impacts not included since the amount of sulfur dioxide to sulfate conversion is unknown for short time periods.
7. Coal BTU content of 27×10^6 BTU/ton assumed.
8. Calculations based on Workbook of Atmospheric Dispersion Estimates, D. Bruce Turner, U.S.D.H.E.W., 1969, pp. 5-9. Assumptions used include a) a 12-hour burn period b) Class C stability c) impact on an adjacent house 10 meters distant and d) indoor concentrations of impacted house assumed to be 50% of outdoor concentrations. Thus the 12-hour impact on the outside structure of the impacted house would be four times as great as the value shown.
9. Based on 24-hour calculations as explained in Footnote 7 above, it was assumed that the heating season is 4 months long and that downwash conditions occur on one quarter of the heating season days.
10. Compilation of Air Pollutant Emission Factors, U.S.E.P.A., 1975.
11. Sources include those listed below. Emission factors for B(a)P from coal (.074, 2.5, and 12.7 g/10⁶ BTU) were reduced by the available B(a)P emission factor for wood in wood stoves (.135 g/10⁶ BTU)
 - a. Beine, Dr. Helmut, Level of 3,4 - Benzopyrene in the Waste Gasses of Domestic Stoves Using Solid Fuels. Staub-Reinhalt. Luft 30,8:23-26, August 1970.
 - b. Hangebrauck, R.F., et al, Sources of Polynuclear Hydrocarbons in the Atmosphere, U.S.D.H.E.W., Public Health Service, AP-33, PB 174-706, Washington, DC, 1967. In: Particulate Polycyclic Organic Matter, National Research Council, National Academy of Sciences, Washington, DC, 1972.
12. Geomet's Dr. Demetrios Moschandreas, cited in the September 1980 Environmental Science and Technology article entitled "Indoor Air Pollution", has recorded B(a)P levels in rooms with wood-burning fireplaces of over 11 ng/m³. In an 11/13/80 phone conversation, he estimated average B(a)P levels in such locations at 2 to 4 ng/m³.
13. An 8-hour burn period was assumed.

14. The range in B(a)P levels discussed in Footnote 11 were divided by a wood fireplace B(a)P emission rate of $.045 \text{ g}/10^6 \text{ BTU}$'s which data is from Table 3 in DEQ's draft research paper.
15. This row of values is the product of the two above rows.
16. Values were reduced by $.33/.55$, $1/55$ and $3.67/1034$ to account for the B(a)P indoor concentrations from wood which were assumed to have been replaced by coal.
17. Values based on burning 4 of 12 months per year.
18. The range in TSP levels discussed in Footnote 6 were divided by a wood fireplace B(a)P emission rate of $.045 \text{ g}/10^6 \text{ BTU}$ which data is from sources cited in Footnote 11.
19. If burning wood with a $.045 \text{ g B(a)P } 10^6 \text{ BTU}$ emission factor results in 24-hour B(a)P concentrations of $1 \text{ ng}/\text{m}^3$ ($.001 \text{ ug}/\text{m}^3$), and if a 35 pound charge of wood was assumed, then an equivalent amount of coal (22 pounds) which has a TSP emission factor which is 2990 times as great is estimated to produce TSP concentrations of $2.99 \text{ ug}/\text{m}^3$.

The low value is derived from assuming a lesser charge of 7 pounds coal and a lesser net TSP emission factor of $3 \text{ lb}/\text{ton}$ ($2.99 \times 7/22 \times 3/8 = .36 \text{ ug}/\text{m}^3$). The high value is derived from assuming a greater day's charge of 44 pounds coal and a higher net TSP emission factor of $13 \text{ lb}/\text{ton}$ ($3.0 \times 44/22 \times 13/8 = 9.7 \text{ ug}/\text{m}^3$).
20. A 4-month heating was assumed
21. A methodology similar to that cited in Footnote 19 was used.

APPENDIX A

Summary of Oregon and Federal Air Quality Standards for Various Pollutants and Recent Portland Area Concentrations

	<u>ug/m³</u> <u>Annual</u>	<u>ug/m³</u> <u>24-Hour</u> <u>Maximum</u>	<u>ug/m³</u> <u>3-Hour</u>
TSP			
- Primary Standard	75	260	N.A.
- Secondary Standard	60	150	N.A.
- Oregon Standard	60	150	N.A.
- Portland Area 1987 Max.	84	254	N.A.
SO₂			
- Primary Standard	80	365	N.A.
- Secondary Standard	N.A.	N.A.	1300
- Oregon Standard	60	260	1300
- Portland Area Current Max.	32	217	N.A.
SO₄			
- California Standard	N.A.	25	N.A.
- Portland Area Recent Max.	3-6	12	N.A.
B(a)P			
	Nanograms/cubic meter		
- Portland Area (1969 single site values)	2.6	N.A.	N.A.
- Average U.S. 1966 levels	3.2	N.A.	N.A.
- Average U.S. 1975 levels	.5	N.A.	N.A.

WTG:g
AG963 (1)

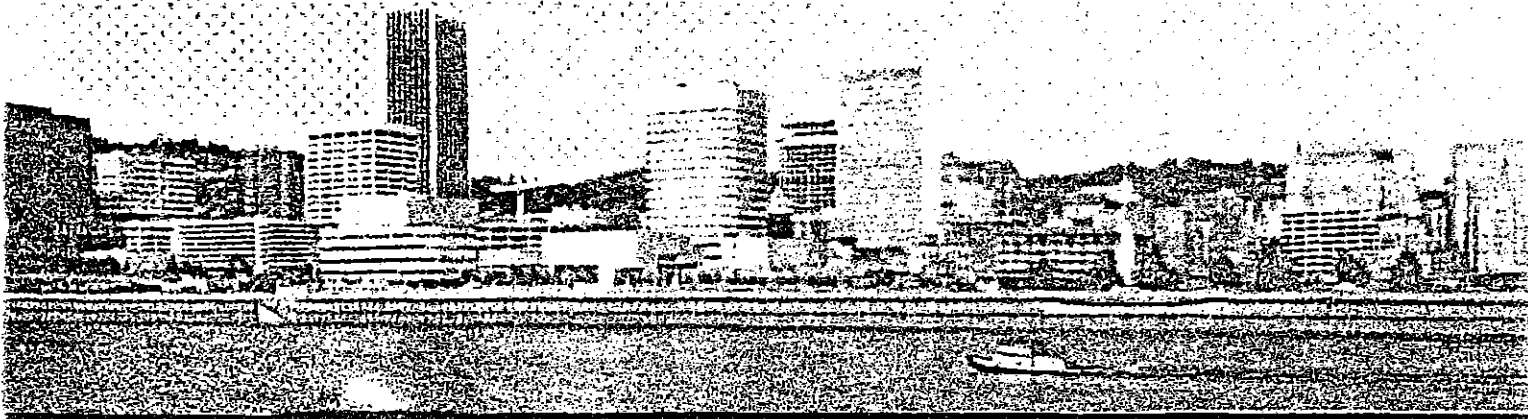
Portland Air Quality Advisory Committee

Interested Parties
June 23, 1980
Page 11

P.O. Box 1760
Portland, Oregon 97207
(503) 229-6092

1. The DEQ should adopt a strategy to ban the sale of residential coal in the Portland AQMA to users, with the exception of current home users, who use it as a primary source of heat. Existing residential users shall be allowed to burn coal in residences for five years, after which they should not be allowed to burn coal unless they obtain a hardship variance.

AQ0099.A



Statement of Need for Rulemaking

Pursuant to ORS 183.335Z(2), this statement provides information on intended action to amend a rule.

Legal Authority

ORS Chapter 468, including 468.020 and OAR 340-22-020

Need For The Rule

To prevent increased difficulty in meeting ambient air standard, protect the public against potential adverse health affects and avoid severe nuisance conditions including soiling, odors, and visibility loss.

Principal Documents Relied Upon

Coal Health Effects Review Committee Summary Report to the DEQ
April 21, 1981

Fiscal Impact Statement

Potentially \$400,000 in annual lost business to present coal suppliers which may be offset by increased business for cleaner energy sources. Investments up to approximately \$500 for those households of the approximately 2,000 that heat with coal and will need to provide a new heating system by no later than July 1, 1983.

PROPOSED RULES TO LIMIT THE SULFUR AND VOLATILE
MATTER OF COAL SOLD FOR DIRECT SPACE HEATING

COAL

340-22-020 (1) After July 1, 1972, no person shall sell, distribute use, or make available for use, any coal containing greater than 1.0 percent sulfur by weight.

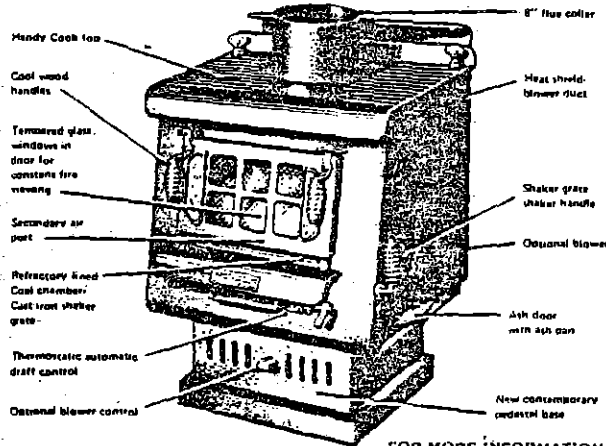
(2) After July 1, 1983, no person shall sell, distribute, use or make available for use, any coal containing greater than 0.3% sulfur and 5% volatile matter as defined in ASTM Method D3175 for direct space heating within the Portland, Salem, Eugene-Springfield, and Medford-Ashland Air Quality Maintenance Areas.

NOTE: ANY ATTACHMENTS NOT INCLUDED WITH THIS REPORT
ARE AVAILABLE FOR REVIEW AT DEQ HEADQUARTERS,
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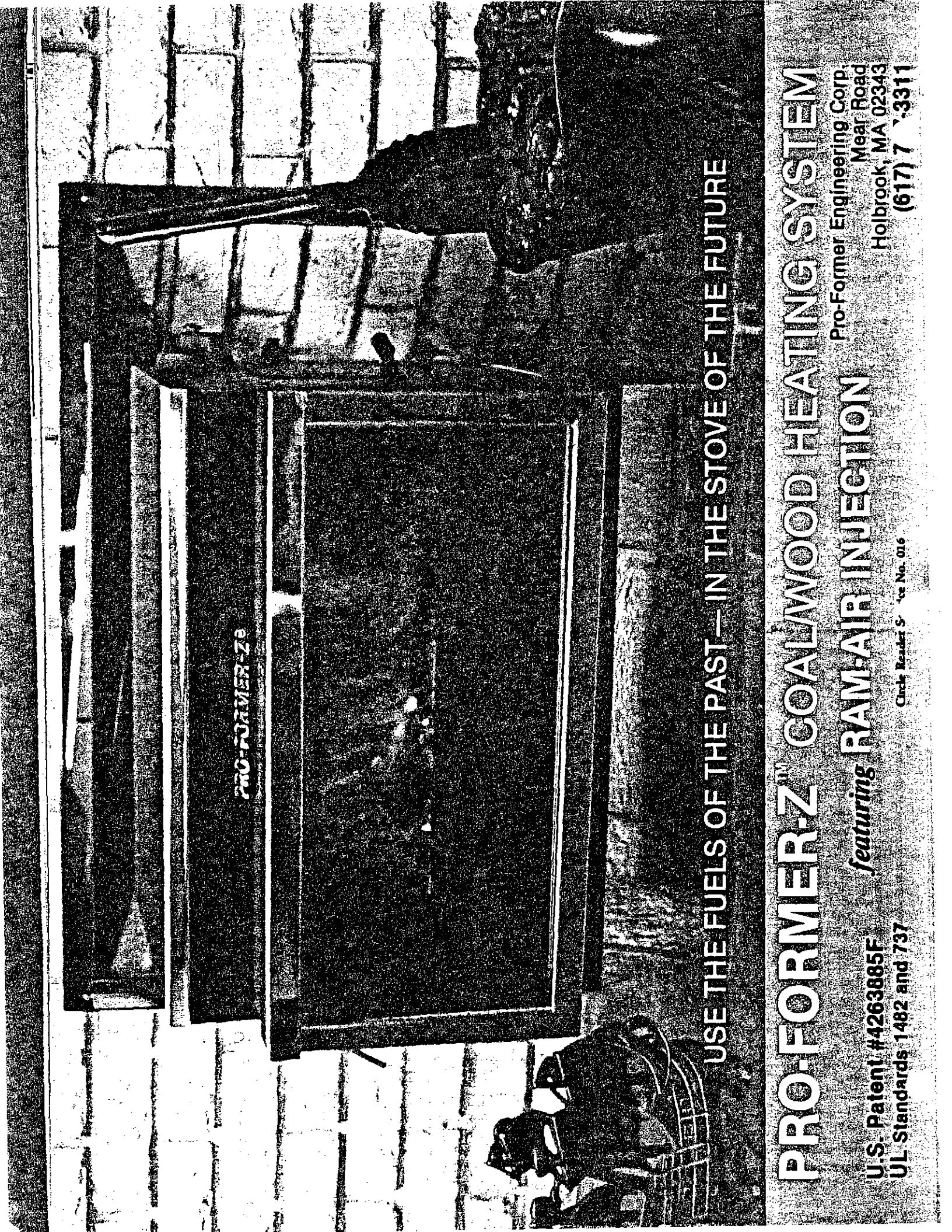


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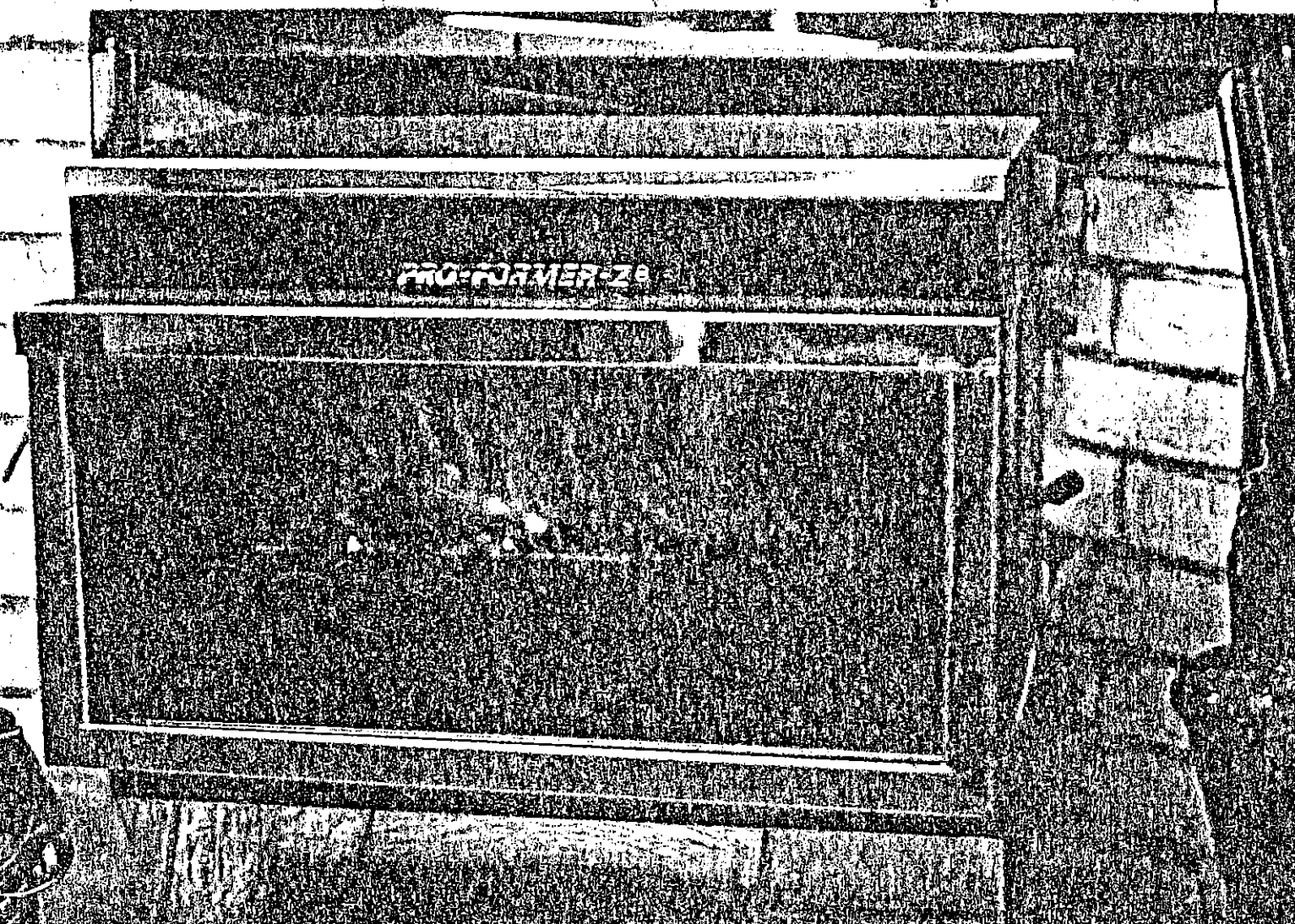
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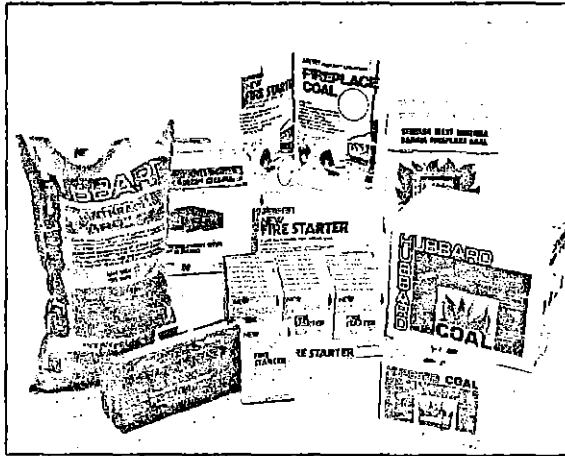
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Don't be left out in the cold. Last year's production of anthracite coals for heating units in stove, nut, pea, buckwheat and barley hardly met the requirements for the coal dealers in the Northeast New England marketplace. This season's sales of stoves in this marketplace alone will reach 270,000. With three tons average usage per season the market needs over 700,000 tons of stove, nut and pea alone. The present production facilities in the anthracite fields cannot meet this demand. If you wish to join a growing field with a growth company contact Hubbard Coal and Mining Companies.

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Hubbard Coal is looking for purchasers of additional tonnage in anthracite and bituminous production. * Mines are located in Kentucky, Virginia, West Virginia, Pennsylvania and Utah.

*FOR INFORMATION on becoming a Hubbard Coal Dealer/Distributor please write to us at P.O. Box 1216, Birmingham, Michigan 48012. Call 717/ 824-7505 for Barbara Bowen or 313/ 645-1937 for Red Phillips.

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COAL**

Presently we have 20 Dealer/Distributors serving the West/Mid-West/Northeast and New England Markets.



15 bags (1 pickup load) →
could heat an Oregon home.

Coal dealers—and consumers—who lack yard space for bulk tons (above), have the option of bagged coal (right). Photos by John Florian.



The Rush Continues...

By Jack Goldberg
Associate Editor

Using coal is the American way to heat a home.

That appears to be the thinking of millions of Americans seeking to keep warm this winter while trying to make oil-rich OPEC go hungry.

Coal, which has been receiving a bum rap ever since Tiny Tim found a lump of it in his Christmas stocking, continues its modern-day rush as a home heating fuel. And industry experts predict the best years for coal are still ahead.

"We see a continuing increase in the use of coal," says Paul Merritt, managing editor of Coal Age, a respected trade publication. "The rise will not be as fast or as dramatic as has been the case five years ago but it will be more steady, consistent and long-lasting."

One big snag—distribution—is starting to smooth out.

"The retail distribution market pretty much gave in 1965," says Tony Anthony, associate director of public and media affairs for the National Coal Association. "It is starting to turn around and build up quickly."

It has to. Coal use in Connecticut alone this winter is expected to soar more than 300 percent from the '79-'80 season, predicts Connecticut's energy office director, Joseph A. Belanger.

And where are we going to get this coal? From Pennsylvania, an-

swers that state's Lt. Gov. William Scranton III, who recently toured Connecticut, Massachusetts and Rhode Island, promising that no one who uses coal there as primary heat this winter will go cold.

Tight, not critical

Scranton, of course, is speaking about anthracite, the hard coal that heats homes in the northeast—the nation's major coal burning region.

"It will be a tight market," Scranton says of this season, but it will "not be a critical situation."

He blames the 30-day anthracite coal strike earlier this year and environmental factors for spot shortages which may appear this season in New England, New York and New Jersey. He urges consumers to buy coal now to avoid dealer's empty bins later.

Last year, coal shortages put a damper on coal stove sales and raised consumer and industry skepticism over the realistic potential of coal's deliverance of America from the OPEC age.

Blaming distribution problems for last season's woes, Scranton warns that while shortages won't be as dramatic this winter, they will occur in certain areas.

"I think what you've seen is an industry that was lively for a number of years, then died, and now we've come to the problem of reurrecting it," he said. "The demand has been greater than had been expected."

More severe

However, the New England Congressional Caucus is predicting a more severe shortage of anthracite than Scranton's estimate.

"If we have even a moderately cold winter, we'll have a shortage this winter," said Robert Pratt, executive director of the caucus.

After surveying the energy offices in Connecticut, Massachusetts, Rhode Island, Vermont, New Hampshire and Maine, the caucus concluded there will be a 54 percent increase in anthracite coal consumption this winter.

Pratt said the difference between an expected increase in production of about 20 percent and of more than 50 percent in demand means a shortage is inevitable.

"I don't see significant progress since last year because the producers are so conservative," he said.

Pratt said it's understandable that the producers do not want to increase production when they are not receiving large orders now and it's equally understandable that the dealers do not want to place large orders when it's off season for their customers.

Most of the dealers are 'Mom and Pop' operations and do not have well-established sources of capital. They say, "Why should we trust that the orders will be there?" he said.

The energy offices in New England have projected that homeowners will need more coal in every



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NATURAL GAS

Deregulation could spark a boom for solid fuel sales

by Steve Maviglio

IF THE regulatory reform dreams of the Reagan Administration come true, the average American family's annual gas heating bill will jump a whopping 86 percent next year, according to the Energy Action Foundation. Such an increase, many industry experts believe, will spark record levels of solid fuel equipment sales.

According to the American Gas Association, natural gas accounts for 26 percent of all energy consumed in the United States and about 30 percent of the energy produced in the nation. Gas also keeps about half of America's households warm.

In the next few months, these residential users may be in for an unpleasant shock. Under the National Gas Policy Act (NGPA) of 1978, prices of old gas (previously discovered) will climb gradually until Jan. 1, 1985, softening the impact of a sudden price boost on the fragile economy. (Newly discovered gas is already decontrolled.) For example, next year's schedule calls for a 14 percent price hike.


However, President Reagan has hinted that controls may be lifted as early as December. This action would boost the gas heating bill of the average family from \$505 in 1981 to \$940 in 1982, according to the Energy Action Foundation.

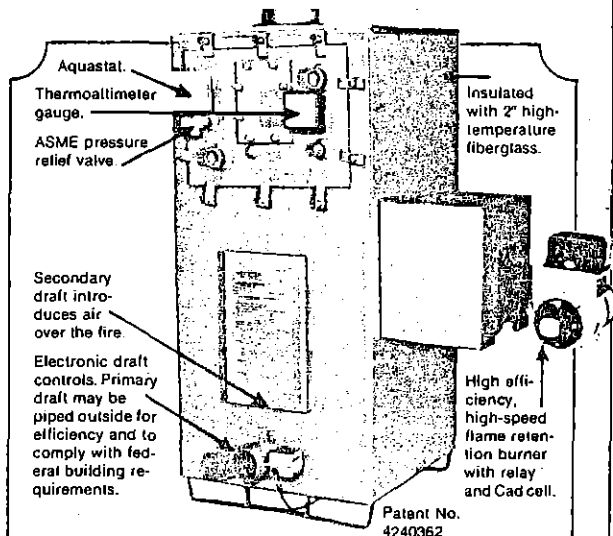
"Consumers will face price increases that make OPEC hikes look small," says Energy Action Director Edwin Rothschild. "These kinds of increases," he notes, "will make it even harder for middle-income American families to stay even with inflation."

The industry's powerful trade group, the American Gas Association (AGA), also warns of the effects of a swift end to controls. In a recent report, AGA warns that "immediate total decontrol of natural gas wellhead pricing would increase both inflation and oil imports."

The report goes on to say that gas prices paid by users in all sectors would nearly double, resulting in a first-year

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July 1981 39

AVERAGE ANNUAL GAS UTILITY BILLS FOR HOUSE HEATING CUSTOMERS

	1981 Cost	1982 with NGPA Plan	1982 with Reagan Plan	1982 Difference between Reagan Acceleration and NGPA Plan	Pct. Increase over 1981 Cost with Reagan Acceleration
UNITED STATES	\$505	\$575	\$ 940	\$365	86%
NORTHEAST					
Connecticut	\$740	\$835	\$1180	\$345	59%
Delaware	680	770	1145	375	68
Dist. of Columbia	670	760	1145	385	71
Maine	500	560	740	180	48
Maryland	580	660	1000	340	72
Massachusetts	665	750	1075	325	62
New Hampshire	530	600	895	295	69
New Jersey	680	765	1115	350	64
New York	770	870	1280	410	66
Pennsylvania	680	775	1230	455	81
Rhode Island	580	660	1005	345	73
Vermont	610	690	1045	355	71
NORTH CENTRAL					
Illinois	\$750	\$855	\$1385	\$530	85%
Indiana	585	670	1135	465	94
Iowa	540	620	1045	425	94
Kansas	420	485	920	435	119
Michigan	640	735	1245	510	95
Minnesota	620	710	1170	460	89
Missouri	545	620	1040	420	91
Nebraska	470	545	970	425	106
North Dakota	625	715	1185	470	90
Ohio	555	635	1055	420	90
South Dakota	475	545	925	380	95
Wisconsin	595	680	1095	415	84
SOUTH					
Alabama	\$400	\$455	\$ 710	\$255	78%
Arkansas	315	365	685	320	117
Florida	215	245	370	125	72
Georgia	390	450	740	290	90
Kentucky	440	505	890	385	102
Louisiana	345	395	660	265	91
Mississippi	335	385	635	250	90
North Carolina	450	515	790	275	76
Oklahoma	370	425	775	350	109
South Carolina	335	380	585	205	75
Tennessee	345	400	705	305	104
Texas	360	410	650	240	81
Virginia	620	700	1060	360	71
West Virginia	520	595	975	380	88
WEST					
← Alaska	\$495	\$580	\$1160	\$580	134%
Arizona	260	295	450	155	73
California	300	345	595	250	98
Colorado	440	505	875	370	99
← Idaho	495	560	845	285	71
← Montana	420	485	880	395	110
Nevada	355	405	660	255	86
New Mexico	370	425	710	285	92
← Oregon	500	565	830	265	66
Utah	510	585	1060	475	108
← Washington	520	590	875	285	68
← Wyoming	500	575	995	420	99

Courtesy of Energy Action Foundation, Washington, D.C.

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direct cost to U.S. consumers of more than \$60 billion. Besides that, the group fears that a windfall profits tax on gas could arise.

Economists at the Natural Gas Supply Association (NGSA) believe otherwise. In a contrasting study, NGSA predicts that immediate decontrol would "stimulate exploration and production of natural gas, which in turn would cut imports of foreign oil."

Even if the administration holds off on the immediate lifting of controls, gas prices are expected to climb 15 percent next year anyway. But the cost of gas still will remain at nearly half that of oil. All told, natural gas prices have risen 42 percent since 1977, compared to oil's 105 percent increase.

That may be the prime reason behind the nearly 910,000 oil-to-gas-heat conversions recorded over the past three years. Similar rates of fuel switching are expected to continue, since nearly a third of the 16 million oil-heated homes in the United States already have gas hookups for cooking or water heating.

BUT THE oil industry is not taking this rapid loss of business sitting down. Several metropolitan areas have been flooded with ads warning about the pitfalls of rising gas prices. One commercial, funded by the New England Fuel Institute (an oil dealers trade group), lectures: "The more you know about gas, the more comfortable you'll feel about oil heat."

"Natural gas is the most ridiculous bargain on the market," a leading gas industry analyst recently told *The Wall Street Journal*. "The average price of gas is about \$2 per 1,000 cubic feet. That equals \$12-a-barrel oil. John Q. Public waits until he can't pay the bills. Apparently the price isn't high enough to hurt yet."

Current consumption figures prove him wrong. Despite the addition of some 400,000 households to the gas list this year, consumption remained flat. Average consumption is down too, from 107,000 cubic feet in 1974 to 90,000 today.

But today's conservation will bring tomorrow's good times to the gas industry. Many analysts are wary of obtaining future supplies. They warn that this year's gas shortage in Massachusetts may be a grim sign of things to come.

Just 25 years ago, oil companies flared gas because it was so cheap and available. One gas company executive believes that several trillion tons were burned indiscriminately.

After World War II, pipeline construction picked up, linking the gas-rich Southwest with the energy-starved Midwest and Northeast. The Southwest continues to dominate gas production, though Alaska should provide the bulk of natural gas output through the year 2020.

Canada holds significant gas reserves as well. Currently meeting five percent of U.S. demand, that nation's exports are limited to what the government feels is "excess" to their needs. According to the Canadian Petroleum Association, Canada holds gas reserves of 89 trillion cubic feet—not to mention untapped deposits in the far north and offshore.

South of the border, Mexico already has begun to meet U.S. shortfalls. Today it sends us several million cubic feet. By 2000, that figure should rise to two trillion cubic feet annually.

Other exploration possibilities include coal, peat and oil shale gasification, methane, biomass conversion, and development of western tight sands and Devonian shale.

Questions about future natural gas availability and an immediate price shock can only mean good news for the solid fuel industry. As with the oil price hike in 1978, sales of wood and coal-heating equipment may shoot upward.

Several industry sources say that deregulation of natural gas will have a "booming" effect on the industry, "opening new markets for stoves that never existed or were latent before."

Some manufacturers believe that fireplace inserts will be especially big sellers. Urban and suburban homes heated by gas in the Northeast and Midwest are likely to turn to wood and coal for auxiliary heat, resulting in insert sales. Smaller stoves also should become sales leaders.

The White House has not set a time frame for ending controls, so it is still too early to predict any effect on this season's sales. Senate Energy Committee Chairman Jim McClure (R-Idaho) forecasts a vote by the end of the year. Others predict quicker action. SM

For a state-by-state analysis of the projected price increases under complete deregulation if approved this June, see the accompanying table.

For The Warmth In Your Hearth

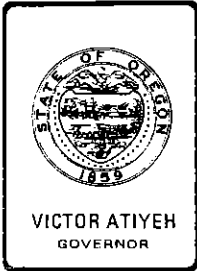
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- **CLEANER TO HANDLE** than wood, has no bugs or bark to bring into the home. Fewer ashes to remove.
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- **COSTS LESS** Per million BTU's to use than fuel oil, natural gas, wax logs and wood.
- **HAS BEEN TESTED** by Commercial Testing and Engineering.

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Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

Prepared:
Hearing Date:

NOTICE OF PUBLIC HEARING

A CHANCE TO BE HEARD ABOUT:

Proposed Rules to Limit the Sulfur and Volatile Matter of Fuel Coal For Direct Space Heating

WHAT IS THE DEQ PROPOSING?

Interested parties should request a copy of the complete proposed rule package. Some highlights are:

- ** Coal sold & used for direct space heating in the Portland, Salem, Eugene and Medford airsheds would be restricted to a 0.3% sulfur content and a 5% volatile content.
- ** The restriction would be effective after July 1, 1983.
- ** The rule is considered a preventive measure necessary to avoid interference with attainment of air quality standards and to avoid potential adverse health effects and nuisance conditions.

WHO IS AFFECTED BY THIS PROPOSAL:

Distributors and users of coal for direct space heating.

HOW TO PROVIDE YOUR INFORMATION:

Written comments should be sent to the Department of Environmental Quality, Air Quality Division, Box 1760, Portland, Oregon 97207, and should be received by

Oral and written comments may be offered at the following public hearing:

<u>City</u>	<u>Time</u>	<u>Date</u>	<u>Location</u>
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_____	_____	_____	_____
_____	_____	_____	_____

WHERE TO OBTAIN ADDITIONAL INFORMATION:

Copies of the proposed rules may be obtained from:

DEQ Air Quality Division
Box 1760
Portland, Oregon 97207

LEGAL REFERENCES FOR THIS PROPOSAL:

This proposal amends OAR 340-22-020.
It is proposed under authority of ORS 468.295.

This proposal does not affect land use as defined in the Department's coordination program with the Department of Land Conservation and Development.

FURTHER PROCEEDINGS:

After public hearing the Commission may adopt rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. The adopted regulations will be submitted to the Environmental Protection Agency as part of the State Clean Air Act Implementation Plan. The Commission's deliberation should come in _____ as part of the agenda of a regularly scheduled Commission meeting.

A Statement of Need and Fiscal Impact Statement are attached to this notice.

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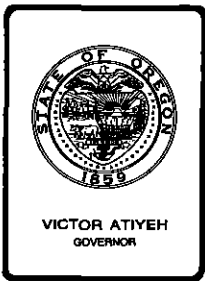
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Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Linda K. Zucker, Hearing Officer

Subject: Public hearing report on the proposed rules to limit the sulfur and volatile matter of fuel coal for direct space heating.

SUMMARY OF PROCEDURE

Pursuant to public notice, a public hearing was convened at City Hall in Portland, Oregon at 7:00 p.m. on November 17, 1981.

SUMMARY OF TESTIMONY

SPEAKERS

Dr. C. P. Shade, Multnomah County Health Officer, was a member of the DEQ Coal Health Effects Review Committee organized to examine and make recommendations on the risks to health of Oregonians which might result from coal combustion products in the ambient air due to increased coal use in home stoves. The health advisory committee recommended an outright ban on the use of coal. Coal is unique in its production of sulfur oxide emissions and it is this air pollutant which is of greatest concern from a health impact standpoint. The problem it creates is not of considerable magnitude now because coal does not enjoy a large share of the heating market. However, increased use of coal is anticipated. Portland, Medford-Ashland, and Eugene-Springfield have a higher potential for air pollution than other cities which have experienced lethal air problems partially attributable to extensive coal burning. He considers the rule as proposed to be consistent with the Committee recommendations.

John Hudanish is developing a Russian-type stove which he believes is relatively smoke free, although it would not control sulfur. The stove is a large masonry mass consisting of a fire box and a series of flues, or passageways leading circuitously to the chimney. Wood or coal fuel is ignited in the fireplace and burned with door and damper wide-open in order to admit the maximum supply of oxygen. A strong draft assures

a hot fire with higher combustion efficiency causing the fuel (coal) to burn cleaner. Mr. Hudanish asked that the Commission defer ruling until he has had an opportunity to more thoroughly test his prototype stove. Written testimony available.

John Charles, Executive Director of the Oregon Environmental Council, an umbrella group consisting of 67 organizations having 2300 individual members, expressed support for the proposed rule. Large industrial sources are now under control and it is necessary to look at other pollution sources. The Department's recommendations are reasonable. The agency should heed the report and recommendations developed by the Coal Health Effects Review Committee whose organization it encouraged.

Joe Weller, Regional Director of the Oregon Lung Association, participated in the Coal Health Effects Review Committee and endorses the Committee's conclusions. Mr. Weller urges conservation of energy resources rather than helplessly concluding that there is a need to burn coal in order to meet energy demand. People choosing to live in metropolitan areas must relinquish freedoms in order to protect public health. The proposed coal restriction is an absolutely necessary strategy in the fight for respiratory health. Written testimony available.

Grant E. Remington of the Oregon Chimney Sweeps Association, discussed various safety aspects and fire hazards occurring when coal is used. He supports the regulation because it will probably result in raising the price of coal to the price of wood per BTU. This increase will encourage people to use coal properly and safely. Currently, coal cannot be used in wood stoves without voiding guarantees and harming the stoves. Use of coal will exaggerate the current problems chimney sweeps have in teaching people proper burning techniques.

Dan Bracken, Chairman of the Portland Air Quality Advisory Committee, would see a ban on the sale of residential coal in the Portland airshed. Committee members come from diverse organizations and interest groups, yet the Committee unanimously endorsed the ban. Unanimity is rare. The unanimous endorsement recognized that the Portland airshed violates three air pollution standards: particulate, carbon monoxide, and ozone. While the Portland airshed is currently within the ambient sulfur dioxide standard, the Committee believes that a switch to residential coal burning will cause this clean air standard to be violated also. That would further compound the problems in the Portland airshed of accommodating population growth and economic development with the desire for clean air. The Committee is mindful that prevention is the strategy of choice.

Kenneth Johnson opposes the proposed regulation. He believes that DEQ has not satisfactorily answered a number of questions:

1. Why does the agency continue to imply that coal export through the Portland area will lead to greater local residential coal burning, when the agency has been informed of numerous reasons why the implication is incorrect? ;

2. Who is the source of the projection that there will be a "conversion of large pulp mill power plants to coal firing", thus implying greater availability of local residential coal? ;
3. Why does the agency insist that coal "is becoming more attractive than wood" while wood costs \$100 per cord and 74% of Oregon's residential wood burners do not obtain wood from wood dealers? ;
4. Why does the agency state that "readily available firewood is becoming scarce" when forest service personnel state that obtaining fire wood in the Hood River and Wind River Ranges is no problem? ;
5. Why does the DEQ state that "27 of 36 stove ads" were for combination coal/wood heaters without identifying the source of the statement as a publication of the Society for the Protection of New Hampshire Forests? ;
6. Why does the agency state that "almost 1% of Oregon households" now use coal as a space heating fuel when an EPA energy survey found that less than 0.2 of 1% of Oregon households use coal as a primary or secondary fuel source? ;
7. What is the basis for the prediction that coal usage will increase as substantially as the agency maintains? ;
8. Why has the agency not provided any data on existing and projected industrial coal usage in the Portland area so that the entire coal burning matter can be put into proper perspective?

Mr. Johnson concludes that DEQ's data on projected coal usage is unsubstantiated and, sometimes based on assumptions which flatly contradict facts established by recognized, knowledgeable sources. He urges the Commission to refrain from adopting the proposed regulation until it has conclusive evidence that residential coal burning is or will ever become a problem. Written testimony available.

William Hugh Delanty does not believe there is any problem in residential coal burning. There are no identified emissions. Wood is cheaper to burn and coal is a minor competitor. The transportation costs of coal will continue to rise while wood will remain readily available. Mr. Delanty questions whether the Coal Health Effects Review Committee was organized to justify a previously made decision. He proposes that any regulation should address irresponsible coal burning, but recognizes that there is no coal burning device which can control SO².

Donald Kanis is a residential coal burner. He believes that coal burning is far more efficient than wood burning.

David Kanis finds coal to be cheaper by as much as 1/2 to 1/3 the cost of a cord of wood. Also, wood cannot be banked. Mr. Kanis wants clean air but wishes to protect his right to use the fuel of his choice.

Jim Porcelli of Housewarmer's Fuelco agrees with the need to maintain clean air. However, he suggests that instead of a ban, devices be developed to control coal emissions. He points out that the proposed regulation does not anticipate and provide for future developments.

Bill Braaten opposes the proposed regulation. He is concerned about its effect on current coal users. He believes the agency should do more research into cleaner fuels before proposing this measure.

Clifford L. Arntson of Albina Fuel Company opposes the proposed regulation. He believes that the agency has already made the determination to outlaw the use of coal by establishing standards which no coal in the country can meet. He finds this a disservice to the general public and especially to those people who must rely on alternate sources of fuel to reduce their very high utility bills. Coal burning is an old practice. The coal commonly used is a bituminous coal with very low sulfur (.66%), 49% fixed carbon, and 46% volatile matter, which is necessary for a free burning coal. Most of the coal is being burned in a very wide area. There is presently no concentration of coal burning. Mr. Arntson proposes that the Commission wait until a problem arises. It is his perception that space heating with wood stoves has pretty much reached its peak, and more people will return to automatic heat as they can afford to do so.

Robert E. Maloney has had experience in the energy field for over 25 years serving in both public and private positions. He proposes a rigid application of the proposed regulation and objects to any variance exception. He observes that the health effects of coal burning are documented. In fact, The Black Lung Benefits Reform Act of 1977 recognizes the dangers of exposure to coal by protecting a variety of people exposed to coal whether they are miners or not. Mr. Maloney sees no justification for allowing residential coal burning to continue any longer. Written testimony available.

Robert C. Heiberg has burned coal for the last 19 years. He uses a stoker furnace designed to burn efficiently at high heat. His neighbors do not smell the coal smoke. He believes that technology for proper burning is available, yet he could not get stoker coal to burn this year, and is using wood which he finds to be less efficient. He reminds the Commission that the advisory committee has looked only at health without looking at economics.

Max Bader, M.D., M.P.H., Oregon State Health Officer, and Chairman of the DEQ Coal Health Effects Reveiw Committee favors regulation of the quality of coal that may be sold for residential use in areas of Oregon where air pollution problems exist. Coal is a notoriously dirty fuel and would negate much of the progress made to improve air quality during recent decades.

It is possible to treat coal to make it burn cleanly. The Committee does not object to the use of clean burning coal, and such coal will become available in Portland eventually. Moreover, there is no objection to industrial coal use provided that steps are taken to clean up the emissions from the industrial furnaces.

The EQC should act preventatively. However, it should use its existing variance granting capabilities to temper the effect of the regulation in hardship cases. In no event should new residential users of coal be permitted, and the variances should not be allowed to extend beyond the time when coal meeting the regulatory standards becomes available. Written testimony available.

James L. Johnson Jr., Oregon City Commissioner, spoke on his own behalf and for Oregonians for Clean Air. Commissioner Johnson favors the proposal to limit residential coal use to burning of low sulfur and low ash coal.

Patrick Brooks McGinnis of Sandlake Enterprises has developed a fuel made of waste fuels and chemicals. He has had it tested at the University of Oregon and in private laboratories. It is shown to be able to substantially reduce undesirable emissions. It provides an economic alternative to coal.

Chris Wrench is grateful to the agency for its current proposal. Her home is on a steep hill. Her neighbors' woodstove diminishes local air quality. If neighbors were burning coal, living would be impossible.

Suzanne Moore of Oregonians for Clean Air supports the restriction.

Tom Donaca of Associated Oregon Industries explained that the Environmental Quality Commission has no authority over the devices that burn solid fuel. The legislature has been asked to provide this authority but has declined thus far to do so. Therefore, the agency is limited in its regulatory authority to the fuels themselves.

The proposed rule addresses only nonattainment areas, those areas which have not met Clean Air Act standards. While these areas are not currently in violation of federal SO² standards, changes in fuel use could impair the ability to meet this standard also. Currently, unregulated activities are adversely affecting success in meeting clean air standards. Various advisory committees agree that best available control technology has been met by industry. Industry can go no further. Yet the Clean Air Act and Oregon law only control industrial and commercial activity, and do not reach general private citizen activity which contributes to air pollution.

One solution is to seek legislative changes to enable the agency to reach citizen activity which contributes to air pollution. An alternative is to urge voluntary efforts to reduce polluting activities by bus use and car pools. Meteorological forecasting of conditions which prevent adequate ventilation might be used to predict when increased restrictions or enhanced voluntary compliance efforts to limit polluting activities are necessary.

WRITTEN TESTIMONY

William F. Farr, M.D. opposes the ban. He believes that while we are attempting to free ourselves from dependence on imported energy sources, it seems illogical to ban the use of a relatively inexpensive domestically produced energy source. He also objects to use of preventative measures as unnecessary regulation.

Robert S. Tilley, Chairman, Oregonians for Clean Air, is concerned about any possible degrading of air quality in Oregon. While he understands that a lot has been done there, much remains to be done to meet minimal clean air standards, despite the economic pressures which, at times, short change the environment. Grave problems which have occurred on the United States' East Coast and in Europe due to the burning of coal as a fuel should be avoided in Oregon.

Eric Schoblom strongly urges restriction of coal use in the Medford area. He lives approximately 100 feet from a residence which burns coal as a source of heat. He states that smoke from coal fires is heavy, cool, and sinks to the ground. It has an obnoxious odor, is irritating to the respiratory system and is dirty. Residential coal burning has limited his enjoyment of his property. He has found none of these problems to be associated with the burning of seasoned wood.

Robert C. Smith supports the proposed ban on use of high sulfur coal. He feels that its ready availability, low cost, and good burning qualities will make coal an attractive fuel for home heating which will substantially increase its use. He urges the agency to act before people have invested heavily in equipment.

The League of Women Voters of Oregon supports the agency proposal. It is impressed by the conclusions of the Coal Health Effects Review Committee that increased residential coal burning would hinder efforts to attain existing health standards, cause acute lung symptoms for some citizens, and cause an unacceptable increase in potentially carcinogenic polycyclic organic matter. It is important to take this action before coal is readily available when export facilities are built. The League considers the sulfur content limitation to be a reasonable way to regulate the use of coal without closing its use as an alternative heat source altogether.

Al Densmore, Mayor, City of Medford writes:

"The City of Medford is located in a relatively narrow valley, subject to frequent air inversion problems which cause particulates suspended in the air to collect in large quantities and hang over the valley for the duration of the air inversion.

Some time ago coal appeared in this valley for sale in small bags for use in residential heating. The Medford City Council was concerned that this

introduction of coal as heating fuel would make a bad air pollution problem get worse. As a result, an ordinance was passed that bans the sale of coal in the city.

It was realized at the time that a better approach would be to set a limit on the sulfur and volatile content of coal, but the establishment of such standards is beyond the effective ability of local government.

Therefore, the Medford City Council on November 5, 1981, unanimously voted to notify you of our support for the proposal to develop a "clean coal regulation" based on 0.3% sulfur and 5% volatile content. We believe that the proposed regulation would be an effective means of controlling potential pollution from the use of coal throughout our airshed."

Anne Kloka of the Columbia Group Sierra Club, representing over 2,000 members in the Portland area, believes that the agency's proposal shows excellent foresight. Banning "dirty" coal now before individuals and businesses have invested large sums of money into coal and conversion to coal stoves is extremely important. This is because coal is relatively inexpensive, will be readily available (with the new coal export terminals), and burns longer than wood. Coal burning would be especially harmful in the Portland, Salem, Medford and Eugene airsheds which are trying hard to achieve attainment of air quality standards. Additional pollution from coal burning would also limit the amount of new industry that would be allowed to come into these areas. Health and esthetics would be affected by increased coal use. Because technology exists to make a "cleaner" coal, the limited restrictions are sensible.

The League of Women Voters of Salem, in a letter signed by Ann Glaze, Natural Resources Chair, and Sally Carson, President, reports that Salem is already experiencing annual intrusions of smoke and visibility loss from field burning, as well as continuing high levels of carbon monoxide and hydrocarbons, primarily from mobile sources. The addition of sulfur dioxide, sulfates, and carcinogens from coal burning to the air could have serious consequences not only to their health, but also to their economy. Salem has developed a plan for economic growth which includes an aggressive attempt to get electronics-related industries to locate there. One of the major selling points for Salem is the quality of life in the area.

Smoke and soiling from coal would detract from that quality and could hinder highly sensitive silicone wafer production, thereby eliminating from consideration that industry which Salem would most like to have locate there. The League urges that the rule change be implemented as soon as possible with a special provision for current coal users, and before the number of homes using coal increases. The League urges the Department to make the contents of the Coal Health Effects report known to woodstove dealers and to the public which will see that when coupled with environmental and health expenses, coal can be very costly.

Roger Burt, B.S., M.S., Co-Chairman, Citizens for Pure Water and Director, Citizens for a Lead-free Environment, urges the adoption of restrictions on the burning of high sulfur content coal, which is a source of both fluoride and heavy metal emissions. The need for individuals to economize cannot be met at the expense of the airshed with resultant increases in risks to health.

Jackie Rose, supports development of air quality standards which limit residential coal burning in major metropolitan areas. A public health nurse, and life-long Oregon resident, Ms. Rose has seen adverse effects of pollution in other parts of the world.

Steve Boedigheimer of the Office of Environmental Health of the Health Division believes that DEQ has moved responsibly to address the dangers of deleterious health effects of exposure to airborne chemicals resulting from the burning of coal before acute symptoms arise. The method chosen for controlling the use of solid fuel in residential applications appears to leave open the future use of coal or coal-like substitutes that can be shown to have less severe public health consequences. Rather than a more rigid outright ban, the proposed rule encourages research into more acceptable alternatives. While the Health Division supports DEQ's move to adopt the proposed rule, it would not be averse to adoption of rules which permit present, long-time users of coal to continue their current level of use, provided that DEQ can monitor this.

Bill Hamel, Chairman, Board of Directors, Lane Regional Air Pollution Authority, supports the proposed regulation which establishes limits on coal used for residential space heating inside air quality management areas. A survey conducted in Lane County indicates a current low use of coal for residential space heating in Eugene-Springfield. The proposed action is appropriate as a means to avoid future additional air quality problems in those areas where such problems have been identified.

Robert N. Hobbs is concerned that home wood and coal fires are seriously degrading air quality in the Tualatin Valley. Often, in the winter, the air lies stagnant in the valley allowing smoke buildup. A runner, Mr. Hobbs finds the pollution very noticeable to his lungs. He urges adoption of the proposed rule.

E. F. Sukut expressed some graphic opposition to the proposed regulation. He burns a combination of wood and coal and finds that the coal burns with less smoke and the wood with less creosote. He doubts that the work being done by the agency is productive and finds the agency's efforts meddling.

Margy Russell has burned coal for 37 years. She is a widow with a limited income and expresses concern at the cost of changing to another form of heating for her home. She has observed fireplaces putting out more visible pollutants than her coal heater, believes that coal burners are presently in the small minority of Portland residents, and does not feel that legislation to ban coal burning by those few is productive.

Lewis C. Nickerson, President, Nickerson Fleet Management Corp., believes that a rule effectively banning coal for space heating is a community disservice. Coal as an adjunct fuel is a valuable tool and presents no source of breathing danger. He observes that if coal were a substantial threat to health, all people living in Chicago or the East and born before 1950 would be dead. While he has not checked specifically, he believes there must be people still alive back there who are over 31 years old.

William W. Lyons, Vice President, Resource Development/Regulatory Affairs for NERCO, the coal and mineral development subsidiary of Pacific Power and Light Company, writes that while NERCO understands the advisory committee's concerns over air quality issues in the Portland, Salem, Eugene and Medford airsheds, it believes that the problem should be addressed with a more reasonable regulation. Air quality should be analyzed in terms of bestowing a net benefit. The proposed rule is a bar to the use of coal as a home heating fuel although coal usage now makes up only a minimal part of the state's air emissions. It is not economically feasible to produce coal in compliance with the sulfur and volatile levels prescribed by the rule. Present use levels and the improbability that demand will increase suggests that a more equitable approach would be a rule which is both responsive to market place economics and flexible enough to ensure that as cleaner coal becomes available, consumers will shift to its use. Currently, residential coal burning contributes a proportionately small amount to existing levels of pollution. While an approach aimed at prevention is understandable, the proposed rule would do little to improve air quality and would allocate to coal an unreasonable portion of the regulatory constraints necessary to maintain clean air. NERCO advocates an approach based on quantifiable home coal demand figures and opposes a regulation which serves to eliminate an abundant fuel as an energy option.

Jerry Pell, Ph.D., CCM, Division of Coal Utilization Resource Development, Office of Coal Utilization and Extraction, United States Department of Energy, submitted comments on the proposed rule noting that his remarks did not necessarily reflect the views or official policies of U. S. Department of Energy. He is concerned lest the proposed rule be contrary to the public welfare by preventing consumer substitution of all forms of coal, including anthracite, for more costly fuel oil.

He is concerned too that the rule which is "considered a preventative measure necessary to avoid interference with attainment of air quality standards and to avoid potential adverse health effects and nuisance conditions" may actually be directly antithetical to those very objectives by encouraging enhanced homeowner usage of fuel wood in lieu of coal with resultant grievous air quality impacts. He states that the use of coal as a fuel for home heating, particularly anthracite which is the preferred coal form because of its high heat value, environmental benefits, and convenience, has declined in popularity over the last few decades.

Since the drastic increases in price of home heating fuel oil, concerns regarding fuel oil shortages and future price rises, and recent increases in the cost of fuel wood, there has been a renaissance in interest in the residential use of coal. This phenomenon reached its crest during the winter of 1980-81 with the result that major increases in sales of residential coal-burning appliances were met with a serious shortage of anthracite, particularly "chestnut" and "stove" sizes in the Northeastern United States. He cited and provided a copy of an article from Coal Age magazine which stated:

"The anthracite industry is especially suited... to take advantage of the developing fuel situation in the Northeast. England makes the fuel easily obtainable by truck and rail. Anthracite has a high Btu rating and when burned properly, allows for even heating and almost smokeless combustion. It meets EPA standards and most local requirements for emissions and is highly recommended for home use by stove and furnace manufacturers.

Government and some industry officials say that the home heating market could increase anthracite sales by 10% during the next heating season period. This trend toward residential use of coal, which started to gain attention only during the past nine months, is so recent that few government or industry statistics are available. But, coal producers and dealers as well as stove and furnace manufacturers concur that the consumer is no longer just interested, he has started to buy."

Mr. Pell provided various documents containing information on the renewed interest in coal as a residential fuel and on anthracite's desirability for that purpose. He provided, too, reports on comprehensive studies of environmental impacts from home heating with coal and wood. He concludes that it is apparent that anthracite is superior to bituminous coal with regard to air quality impacts from residential space heating. Anthracite is also superior to fuel wood for all emission species except oxides of sulfur. The lower source severity of wood in that instance is probably more than offset by the extremely high fuel wood source severity for POM because of its potential carcinogenicity. He concludes that although national trends remain difficult to predict, it is obvious that coal heating is increasing in certain parts of the county. The future of coal heating will depend on equipment and fuel availability, comparative costs of other fuels, and the impact of governmental emission regulations.

He recommends that the rule be withdrawn. Instead, in order to ensure that air quality considerations are appropriately addressed, he recommends that the agency proposed rules similar to those in effect in New Jersey. The regulations would permit the use of anthracite (hard coal) containing not more than 0.8% sulfur by weight for residential space heating.

R. N. Appling, Jr., Chief, Bureau of Mines, United States Department of the Interior writes: "The proposed rules to limit sulfur and volatile matter of fuel coal for direct space heating appear to be nothing but an attempt to prevent the mining and burning of Northwest coal for space

heating." He doubts that any Northwest bituminous coals -- or even coals from as far away as Utah -- can meet the proposed specifications which are unrealistic. Only unusual low volatile, low sulfur anthracite coal imported from far outside this region could be burned. Possibly some coke could meet the specifications, but even most coke contains in excess of 0.3% sulfur.

Lois Copperman strongly supports the proposed rule. During the past few years her neighbors have utilized wood stoves with unpleasant ambient air effect. She believes that coal burning would be even more obnoxious. She likes the proposed approach which would encourage the production of cleaner coal, but suggests that the rule also attempt to control the stoves in which burning is carried on.

Jerald N. Smith reports that due to the high cost of fuel, coal is the only way for senior citizens to keep warm. He opposes the coal regulation.

Becky and Jim Powell are concerned that particulates resulting from increased coal use would be especially problematic in areas of poor air quality. They are also concerned that SO² might become acid rain in the Cascades, where the soils could not buffer it, leading to loss of fish and wildlife. They support the proposed regulation.

Kenneth E. Jernstedt strongly endorses the proposed rule. One of his neighbors has a coal burning fireplace. The fumes interfere with Mr. Jernstedt's enjoyment of his home. He is also concerned about long-range health effects that coal burning on any wide scale basis may have on children.

Robert M. Greening, Jr. strongly supports the proposed rule and agrees with the findings and recommendations of both Committee and staff reports. His support is based as much on his personal experience as any scientific evidence. His neighbor burns coal in her fireplace. That practice makes his neighborhood smelly, sooty and noxious. He is particularly concerned about the short and long term health effects on his young daughter. He urges adoption of the rule which he sees as not preventing space heating with coal, but lessening the health danger.

Rick Leifer lives in Estacada and is concerned lest the regulation of coal sales in Portland impair his ability to obtain coal for home heating use.

Marian Leifer burns coal and believes that it is no more polluting than wood, particularly the green wood used by most people. A better approach would be to teach people how to burn properly and encourage them to limit automobile use.

Gerald R. Strohane believes that the unavailability of .3% sulfur content coal means the rule limitation is effectively a ban on residential coal use. Anticipated population growth will create vastly increased energy demands. Coal use would substitute for electrical use. Thus, coal use would indirectly reduce the cost of energy by reducing costly new plant construction delays.

Heat production is less in low sulfur content coals. In gaining sufficient heat, more low sulfur coal needs to be burned and thus more SO² is discharged. Mr. Stroshane does not believe that the 1952 London Killer Fog is a good precedent for use in examining the need for coal use restrictions in Oregon. Coal was used in London in a magnitude far greater than it would be used in the Oregon airsheds. Mr. Stroshane believes that limitations on coal use will lead to greater particulate problem from increased use of wood as a home heating fuel. He also minimizes the acid rain problem, believing that there is scientific evidence that acid rain existed prior to the industrial revolution and in a period of no volcanic activity. In any case, the prime culprit in air pollution appears to be wood, not coal. He concludes that the Coal Health Effects Review Committee's report is unobjective and not verified.

Lane Council of Governments finds that the proposed rule is consistent with or contributes to area-wide planning and recommends its approval. The Council notes that the City of Eugene has observed that the proposal contains insufficient information to evaluate if the lowered sulfur and volatile levels would result in reduced carcinogen emissions and if the resulting particulate levels would be acceptable in all areas. The City recommends support, conditional upon resolution of these concerns. The L-RAPA Board of Directors supports the proposed standard, commenting that it is preventative in nature and is consistent with L-RAPA's philosophy of preventing rather than correcting air pollution problems.

L-COG comments that the proposed standard is clearly consistent with adopted area-wide plans to minimize adverse impacts on air quality (Metropolitan Plan, Environmental Resources, Goal 4: "Provide a healthy and attractive environment for the metropolitan population."). Standards on the volatility and sulfur content of fuel would undoubtedly help minimize air quality problems in the area. However, the carcinogen problem may not have been adequately covered, and subsequent regulation may be needed. L-COG supports sulfur and volatility standards on coal used for residential space heating.

J. Lynch felt that due to the high cost of fuel, coal is the only way to keep his senior citizens warm.

Clyde V. Brummell, Chairman of Oregon Homeowners' Association is concerned about:

- 1) The estimated percentage of coal used in relation to electricity, oil, natural gas, and wood;
- 2) Whether sulfur is worse than fireplaces that burn wood;
- 3) Whether DEQ is looking at restricting wood burning; and,
- 4) The ability of DEQ to enter a home in light of constitutional safeguards.

TESTIMONY SUMMARIZED AND ATTACHED IN HEARING OFFICER'S
REPORT TO THE COMMISSION ON COAL BURNING RULES

SPEAKERS (* with written testimony)

1. Dr. C. P. Shade, Multnomah County Health Officer
- *2. John Hudanish
3. John Charles, Executive Director of the Environmental Council
- *4. Joe Weller, Regional Director of the Oregon Lung Association
5. Grant E. Remington of the Oregon Chimney Sweeps Association (OCSA)
6. Dan Bracken, Chairman of the Portland Air Quality Advisory Committee,
- *7. Kenneth Johnson
8. William Hugh Delanty
9. Donald Kanis
10. David Kanis
11. Jim Porcelli, Housewarmer's Fuelco
12. Bill Braaten
- *13. Clifford L. Arntson of Albina Fuel Company
- *14. Robert E. Maloney
15. Robert C. Heiberg
- *16. Max Bader, M.D., M.P.H., Oregon State Health Officer, and Chairman
of the DEQ Coal Health Effects Committee
17. James L. Johnson Jr., Oregon City Commissioner
18. Patrick Brooks McGinnis of Sandlake Enterprises
19. Chris Wrench
20. Suzanne Moore
21. Tom Donaca of Associated Oregon Industries (AOI)

WRITTEN TESTIMONY

22. William F. Farr, M.D.
23. Robert F. Tilley, Chairman, Oregonians for Clean Air
24. Eric Schoblom
25. Robert C. Smith
26. The League of Women Voters of Oregon
27. Al Densmore, Mayor, City of Medford writes:
28. Anne Kloka of the Columbia Group Sierra Club
29. The League of Women Voters of Salem
30. Roger Burt, B.S., M.S., Co-Chairman, Citizens for Pure Water,
Director, Citizens for a Lead-free Environment
31. Jackie Rose,
32. Steve Boedigheimer of the Office of Environmental Health of the Health
Division
33. Bill Hamel, Chairman, Board of Directors, Lane Regional Air Pollution
Authority
34. Robert N. Hobbs
35. E. F. Sukut
36. Margy Russell
37. Lewis C. Nickerson
38. William W. Lyons (NERCO)
39. Jerry Pell, Ph.D., Federal Department of Energy

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40. R. N. Appling, Jr., Federal Department of the Interior
41. Lois Copperman
42. Jerald N. Smith
43. Becky and Jim Powell
44. Kenneth Jernstedt
45. Robert Greening, Jr.
46. Rick Leifer
47. Marian Leifer
48. Gerald Stroshane
49. Lane Council of Government
50. J. Lynch
51. Clyde Brummell, Oregon Home Owners Assoc.

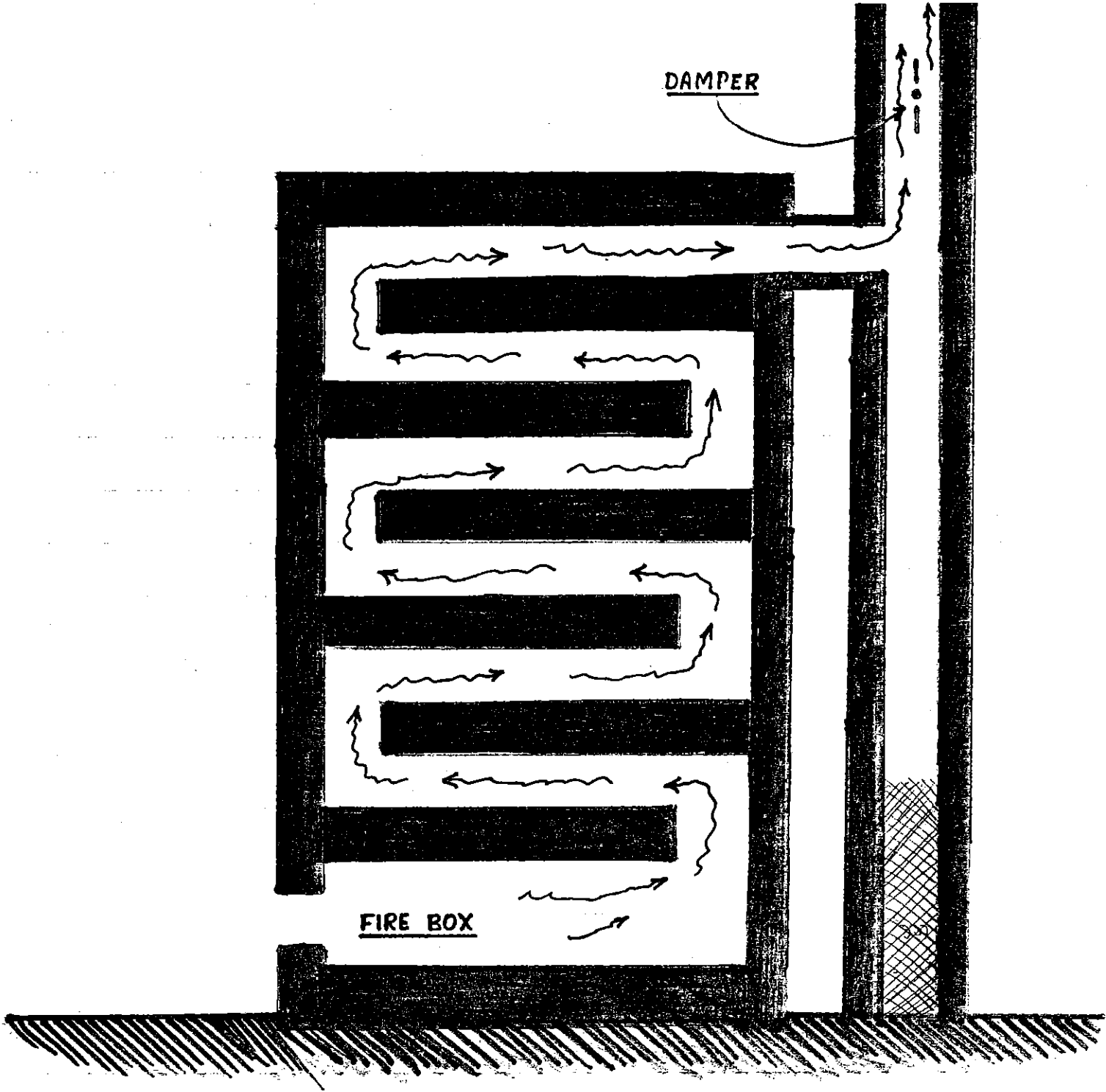
CONCEPT

THE RUSSIAN STOVE is a large, masonry mass consisting of a firebox and a series of flues, or passageways, leading circuitously to the chimney. Wood or coal fuel is ignited in the firebox and burned with door and damper wide open in order to admit the maximum supply of oxygen possible. A strong draft assures a hot fire with higher combustion efficiency, i.e., the fuel burns cleaner. The hot gasses which are the products of combustion then follow the circuitous path through the masonry mass and out the chimney. The masonry, acting as a heat sink, absorbs most of the heat from these gasses, and some of the pollutants are trapped inside the stove and are not released to the atmosphere from the chimney.

After three or four hours of burning, the fire is allowed to go out, the door and damper are closed and the movement of hot gasses through the stove ceases. The masonry has absorbed enough heat by this time to enable it to radiate warmth into the living space around it for another twenty-four hours and more. That is, the living space continues to be heated by a fire that has gone out hours earlier.

THE RUSSIAN STOVE is economical. It essentially gets more heat out of less fuel.

THE RUSSIAN STOVE is RELATIVELY--not absolutely--but RELATIVELY pollution-free. It burns hotter--and therefore cleaner; and it burns only three or four hours out of twenty-four, so that whatever emissions it does release are not released continuously.



CONCEPT - DIAGRAM

MASONRY STOVE



Oregon Lung Association INC. SINCE 1915

830 Medical Arts Building, 1020 SW Taylor Street, Portland, Oregon 97205 (503) 224-5145

November 15, 1981

PREPARED AS TESTIMONY FOR THE ENVIRONMENTAL QUALITY COMMISSION

As a participant on the coal health effects review committee, I was able to watch the earnest and fair way in which the committee came to decisions. The DEQ deserves congratulations for putting this distinguished panel together to predict and head off possible adverse health effects from the burning of coal. The Lung Association participated on the committee and endorses their conclusions. Since the commission has the report of the committee, it is unnecessary for me to repeat its warnings.

Hand in hand with energy use goes energy conservation. As the commission hears from those who suggest that we will need to burn coal in order to meet energy demand, I hope they will remember that our greatest resources of energy lie in conservation, not in the burning of more fuels. If only 30% of our future energy demand could come from conservation, the effect on air quality would be marked. Certainly, of all the energy choices we have before us, the burning of coal for residential heating represents the least desirable alternative.

In metropolitan areas people choose to live together for a multitude of reasons. However, in order to preserve public health, we must all give up certain freedoms in order to protect public health. To those who ask whether this proposed coal restriction measure is an infringement on their freedoms, the answer is, yes. In my mind it is an absolutely necessary strategy in the fight for respiratory health.

I urge enactment of the regulation, and I salute the Department for their foresight in this matter.

Joe Weller
Regional Director
Oregon Lung Association

2944 NE 143rd Place
Portland, Oregon 97230
November 16, 1981

Mr. Bill Young
Director, Oregon DEQ
P.O. Box 1760
Portland, Oregon 97207
Reference: Hearing on Proposed Coal Regulations

Dear Mr. Young:

This letter is in response to your request for written comments pertaining to the proposed rules to limit the sulfur and volatile matter of fuel coal for direct space heating in certain Oregon areas.

Since writing to you last August, I have received reams of material from your staff pertaining to adverse health effects due to coal burning. Similar findings could be made regarding emissions from almost any combustion process. Nothing I have received has reduced my earlier concerns that the DEQ appears to be marching toward regulations with little or no valid data on present or future residential coal consumption.

Mr. Young, the following questions must be answered before your coal usage projections have any hint of credibility:

1. Why does the DEQ continue to imply that coal export from the Portland area will lead to greater local residential coal burning when Mr. Greene, of your staff, received a letter from the Port of Portland 6 months ago (copy inclosed) which gives numerous reasons why such an implication is incorrect?
2. Who is the source of the projection that there will be a "conversion of large pulp mill power plants to coal firing" (thus implying greater availability of local residential coal)? Is this projection, like your coal exporting hypothesis, merely a dream created by your staff?
3. Why do you insist that coal "is becoming more attractive than wood," costing \$100 per cord, when Bonneville Power Administration's recent Pacific Northwest Residential Energy Survey found that 74% of Oregon residential wood burners do not obtain wood from wood dealers?
4. Why do you state that "readily available firewood is becoming scarce" when the information officer for the Forest Service's Pacific Northwest Regional Office told me two weeks ago that obtaining firewood in the Hood River and Wind River Ranges is no problem? (My friends, who have been cutting wood in east-side ranger districts for many years, estimate that this wood costs them only about \$45 per cord.)

5. Why do you state that "27 of 36 stove ads in the nationally acclaimed Wood and Energy Journal were for combination coal/wood heaters" without identifying that this is a publication of the Society for the Protection of New Hampshire Forests? Isn't it reasonable to assume that this magazine, published close to the eastern coal belt, could have a disproportionate number of coal ads?
6. Why do you state that "almost 1% of Oregon households" now use coal as a space heating fuel when the previously-mentioned BPA energy survey found that less than 0.2 of 1 percent of Oregon households use coal as a primary or secondary fuel source?
7. If we convert the above BPA energy survey coal useage percentage to tons of coal (using 3 tons of coal per household as an average for primary and secondary useage), we achieve an existing annual residential consumption rate of 2,400 tons in the Portland area. Can you explain how this existing coal useage will increase 16-fold to 40,000 tons and 308-fold to 740,000 tons to reach the "medium" and "high" consumption ranges, which your agency used as a basis for emission calculations used by the Coal Health Effects Review Committee?
8. Why have you not provided any data on existing and projected industrial coal useage in the Portland area so that we can get the entire coal burning matter into proper perspective? For example, if we can prove your questionable statement that there will be "conversion of large pulp mill power plants to coal firing," we must ask what would be the impact of these plants to the airshed? Using an average coal consumption value of 1.48 lbs. of coal per KW-hour (provided by the engineering staff of Pacific Power and Light Company) and an average power consumption rate of 250,000,000 KW-hours per year for Oregon and Washington pulp and paper mills (provided by the Economic Section of the Bonneville Power Administration), we find that conversion of one plant could result in a coal consumption rate of 185,000 tons per year per plant. Since there are three of these plants in the Portland area, their impact (even with appropriate pollution devices) on the Portland airshed would be monumental compared to existing residential coal useage.

It appears that the DEQ is using the proposed regulations as a Trojan Horse to give an illusion to the public that the agency really is accomplishing something, when in reality the regulations will have little or no measurable impact on air quality. Based on the information that has been presented, one must conclude that the DEQ has not done its homework; Data on projected coal useage is unsubstantiated and, in some cases, is based on assumptions which flatly contradict facts established by recognized, knowledgeable sources.

I urge that the Environmental Quality Commission refrain from adopting the proposed regulations until the DEQ has conclusive evidence that residential coal burning is a problem or will ever become a problem.

Sincerely,



Kenneth J. Johnson

1 Incl
a/s

PS: Copies of this letter are being furnished to interested individuals.



Port of Portland

Box 3529 Portland, Oregon 97208
503/231-5000
TWX: 910-464-6151

April 30, 1981

Kenneth J. Johnson
2944 N.E. 143rd Place
Portland, OR 97230

Dear Mr. Johnson:

In response to your letter of April 13, I am providing you with information concerning the coal export facility proposed for the Port's Rivergate Industrial District. Your specific question was whether a coal export facility would increase the availability of coal for the local market.

We do not believe that construction of the facility would have any effect on either the availability or price of coal in the Portland market. The design of the facility, the typical contractual agreements regarding coal export, and actual operational experience at other coal handling facilities support this statement.

- o Steam coal contracts are generally long-term arrangements between a buyer and seller. The operator of the export terminal generally has no ownership of the coal passing through the terminal and thus is not in a position to divert coal to the local market. In addition, coal destined for export is covered by a U.S. "export declaration" issued by U.S. Customs. Such coal must be exported.
- o Coal export terminals have operated in Vancouver, B.C., for more than 12 years, exporting both steaming and cooking coal to the Far East. Terminal operators there were somewhat surprised at our inquiries regarding your question, as the issue had not been mentioned previously.
- o The size gradation of the export coal would not be suitable for use in residential heating units. Most export steam coal is 4 inches or less in size while home heating coal is usually somewhat larger in size.

Kenneth J. Johnson

Page 2

April 30, 1981

- o Our preliminary designs of the proposed coal terminal do not include provisions for loading of trucks for local use. Although we have not done any analysis, we expect that such transshipment facilities would not prove to be cost effective. Clearly, the quantities of coal which might be consumed in the local residential market would be insufficient to support any major capital investment. Also, the operator would not tolerate any disruptions to the export activities which might be caused by the truck loading.

- o Coal from Utah is currently available in carload quantities in the Portland area at somewhat less than \$100 per ton delivered to residences. This price includes intermodal costs involved in the rail-to-truck transfer. We would not expect this price to change much even if a Portland coal export facility somehow allowed truck pick-ups. This is because the cost of the "ingredients" of the price--i.e., mining cost, rail and truck transportation costs--would not change to any extent.

In summary, we do not believe that coal export activities in Portland would be linked to an increase in the local use of coal for residential heating. Feel free to call me should you have further questions.

Sincerely,



Ken Johnson, Manager
Planning and Research

cc: Bill Greene, DEQ ←

03D659



Phones: (503) 281-1161 • 3246 N. E. BROADWAY • PORTLAND, OREGON 97212
P.O. BOX 12246

November 17, 1981

Department of Environmental Quality

Subject: Ban on coal burning for space heating

I am in opposition to the proposed regulation outlawing the burning of coal for space heating. However, it would appear from newspaper articles that the D.E.Q. has already made up their minds to outlaw the use of coal by establishing standards that they themselves readily admit no coal in the country could meet.

I feel this is a great disservice to the general public, especially to those people who must rely on alternate sources of fuel to reduce their very high utility bills.

Burning coal with wood has been practiced for many years. The coal commonly used is a bituminous coal with very low sulphur - .66%, 49% fixed carbon and 46% volatile matter, which is necessary for a free burning coal.

Most of the coal is being burned in a very wide area, from the Dalles to Eugene, Salem to St. Helens, etc. There is, to our knowledge, no concentration of coal burning in any one area. This brings up the question - Why the worry about pollution burning coal? Why not wait until a problem arises. It is, and has been our feeling that space heating with wood Stoves has pretty much reached its peak and as the novelty wears off, more and more people will return to automatic heat as they can afford to.

ALBINA FUEL COMPANY

Clifford L. Arntson



Dependable Fuel Service Since 1903

My name is Robert E. Maloney. I am an executive consultant in the field of energy. Eight years ago I moved from the San Francisco area to the peak of Mt. Sylvania, commonly known as Mountain Park, within the city limits of Lake Oswego approximately 20 miles south of Portland's city center. My residence is situated on a parcel of land which at that time provided a clear view of the magnificent snow-capped Mt. Hood. In fact, the architects for the project received the top award from the American Institute of Architecture for the outstanding design and construction of the residence. I am sad to say that during the past eight years, the gradual erosion of clean air by pollution from various sources has restricted the clear view of Mt. Hood substantially. Another consideration in moving to this area is the fact that my son and his family, including two of my grandchildren, reside in the hills above St. Vincents Hospital. Also I have served a number of terms as a regent of the University of Portland and was elected chairman of the Finance Committee. I serve the Vatican as a Knight of St. Gregory the Great.

While in San Francisco, I was Chairman, President & Chief Executive Officer of Calor Gas Company and Calor Gas Ltd., a western hemisphere trade corporation doing business in Alberta and British Columbia, Canada. Calor was by far the west's largest contract purchaser and marketer of liquefied petroleum gas with operations extending from the border of Mexico to Pt. Barrow, Alaska. Calor also controlled Metro Engineering and Construction to furnish technical assistance and construction facilities for its customers. My experience in the Energy field is over 25 years.

I served on the National Industry Advisory Committee (22 members) of Presidents Truman and Eisenhower, having expertise with natural gasoline, liquefied petroleum gas and natural gas. I was also a personal consultant to John F. Kennedy in energy matters.

I was also associated with Ray C. Fish, Chairman of Pacific Northwest Pipeline Corporation which constructed the large pipeline system to bring natural gas to the Pacific Northwest--the only major area at that time not receiving natural gas from any source. The pipeline originated in the "four corners" where Utah, Colorado, New Mexico and Arizona meet and extending north serving markets along the way to the Canadian border where it was also able to import natural gas from Alberta and British Columbia.

I have supplied Weyerhaeuser Company with gas for many years and have advised them in a consulting capacity regarding energy.

Also Benton R. Cancell, President and Chief Executive of Potlatch Forest (now retired) likewise consulted with me regarding energy. Potlatch is a fully integrated forest products concern with operations and distributions throughout most of the United States. Their headquarters are in San Francisco.

I have been consulted by numerous natural gas pipeline companies and distributors. Currently I am joint venturing with the Energy Division of Dillingham Corporation and serving them as executive consultant on a number of projects. Dillingham is headquartered in Hawaii and their energy division is headquartered in

Sacramento, California. Fifty-two percent of Dillingham's revenue in 1980 came from mainland U.S. operations, twenty-one percent from Hawaii and the Pacific, with the balance divided among Canada, Australia, New Zealand and other locations. Employees number approximately 13,000.00.

Recently I was given an assignment by the Williams Companies of Tulsa. Williams Companies is a major diversified natural resource company with gross revenues in excess of \$2 billion for the year 1980. Williams controls Peabody Coal Company which is the nation's largest producer of coal with 40 operating surface and underground mines in the United States with proven reserves of approximately 9 billion tons.

I have available as my consulting engineers the Parsons Corporation, a worldwide engineering and construction company with headquarters in Pasadena, California. Their Chairman, President and Chief Executive Officer, General (retired) William E. Leonard has served on my board of directors. They are one of a few engineering companies in the world that are capable of performing mega-projects. As of January 1, 1981, they had a back log of projects to be completed which will exceed \$10 billion. Parsons is considered the leading engineering firm in the installation of pollution controls, the removal of sulfur, and of performing two-thirds of such projects in the free world.

I note that the record includes a recommendation to allow existing residential users to burn coal in residences for five years after which they should not be allowed to burn coal without a hardship variance. This is analogous to allowing

people who are raping the environment to compound the problem by continuing this practice for another five years.

When the state adopted regulation of the automobile exhaust emission, the legislature specifically rejected any comparable exemption for automobile exhaust. This is a much more logical approach to the use of coal and I note that it is the same non-exemption approach that the Oregonian recommended in an editorial entitled "Ban Use of Coal in Oregon Homes," which appeared in the Oregonian on September 28, 1981.

The Oregonian editorial pointed out that Oregon is likely to become a major coal-exporting state which means that large amounts of coal may be available. None of the coal would, according to the article, meet the standards for residential burning. The article went on to refer to the medical problems that follow the use of coal burning. The directors reports to the Environmental Quality Commission compares coal burning to cigarette smoking. I believe the comparison is unrelated to the subject. Cigarette smoking is a voluntary act whereas pollution of the atmosphere by poisonous emissions which likewise produce cancer must be restricted as a matter of public policy.

The "London Smog" is described on page 3 of the directors report. I made inquiry into what is described as the most severe pollution episode and I am reliably informed that approximately 4,000 people were killed as a result of this smog attributes to the residential use of coal. Even our own United States Congress has recognized the health effects of handling as well as burning coal.

In 1969 Congress enacted the Federal Coal Mine Health and Safety Act. This act was designed initially to protect coal miners exposed to coal dust from the effects of "pneumoconiosis." This is a chronic dust disease of the lung and its sequelae, including respiratory and pulmonary impairments, arising out of coal mine employment. This disease is also commonly known as the black lung disease and, in fact, an entire four volume report has followed the evolution of the federal law entitled the Black Lung Reporter.

Less than ten years after the Federal Coal Mine Health and Safety Act was enacted the House and Senate again heard extensive testimony and reports supporting the Black Lung Benefits Reform Act of 1977. The Health and Safety Acts and the black lung program was designed to protect subsurface coal miners. After medical testimony and testimony from the industry, the house and senate on February 2, 1978, entered into Conference Report No. 95-864 to the Black Lung Reform Act of 1977 or Public Law 95-239 which broadened the definition of "miner" under the earlier acts in order to include other people exposed to coal whether they are miners or not. The senate amendment adopted by the conference now includes all self-employed persons and workers who are employed in or around a coal mine or preparation facility in the extraction, preparation, handling or transportation of coal and construction workers who are exposed to coal dust in their employment.

I am submitting a copy of the conference report for the record as well as an explanation of the final rules published by

the Black Lung Reporter. Subsequent to that rule, the Secretary of Labor announced, in a notice of proposed rule, a new regulation defining the term operator to conform to the earlier congressional action.

CONCLUSION

To conclude, there are no justifiable reasons for allowing residential coal burning to continue any longer. As the Oregonian stated:

"Given the problems of finding clean coal, of burning it cleanly and, last but not least, the high cost and difficulty of enforcing any set of standards, the wisest course of action for the state simply would be to ban the use of all non-industrial coal in Oregon."

CONFERENCE REPORT NO. 95-864 TO BLACK LUNG REFORM
ACT OF 1977—PUBLIC LAW 95-239—MARCH 1, 1978

BLACK LUNG BENEFITS REFORM ACT OF 1977

FEBRUARY 2, 1978.—Ordered to be printed

Mr. PERKINS, from the committee of conference,
submitted the following

CONFERENCE REPORT

[To accompany H.R. 4544]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 4544) to amend the Federal Coal Mine Health and Safety Act to improve the black lung benefits program established under such Act, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amendment insert the following:

[The text of H. R. 4544 is here deleted. It appears as Public Law 95-239
in TAB 1—STATUTES]

JOINT EXPLANATORY STATEMENT OF THE
COMMITTEE OF CONFERENCE

The managers on the part of the House and the Senate at the conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 4544) to amend the Federal Coal Mine Health and Safety Act to improve the black lung benefits program established under such Act, and for other purposes, submit the following joint statement to the House and the Senate in explanation of the effect of the action agreed upon by the managers and recommended in the accompanying conference report:

The Senate amendment struck out all of the House bill after the enacting clause and inserted a substitute text.

The House recedes from its disagreement to the amendment of the Senate with an amendment which is a substitute for the House bill and the Senate amendment. The differences between the House bill, the Senate amendment, and the substitute agreed to in conference are noted below, except for clerical corrections, conforming changes made necessary by agreements reached by the conferees, and minor drafting and clarifying changes.

DEFINITIONS

Pneumoconiosis

The House bill did not modify the existing law defining "pneumoconiosis". The Senate amendment defined pneumoconiosis as a "chronic dust disease of the lung and its sequelae, including respiratory and pulmonary impairments, arising out of coal mine employment".

The conference substitute conforms to the Senate amendment.

Miner

The House bill did not modify the existing definition of "miner". The Senate amendment modified the definition to include all self-em-

ployed miners and specified that the term includes workers who are employed in or around a coal mine or preparation facility in the extraction, preparation, or transportation of coal, and construction workers who are exposed to coal dust in their employment.

The conference substitute conforms generally to the Senate amendment with an amendment to clarify that transportation and construction workers are covered only to the extent they work in or around a coal mine and are exposed to coal dust. The conference substitute elsewhere provides that coal mine construction and transportation employers who are not also mine operators shall not be obligated to purchase insurance for the payment of claims under the Federal Mine Safety and Health Act of 1977. However, the conference substitute elsewhere also provides that coal mine construction and transportation employers who are not also mine operators shall be individually liable for the payment of approved claims in appropriate cases. (See section 7, which amends the Act to require such employers to secure a bond or otherwise guarantee the payment of such claims once approved.)

Total disability

The House bill did not modify the provisions of current law which authorize the Secretary of Health, Education, and Welfare to promulgate medical standards for the determination of total disability for all claims. The House bill did, however, bind the Secretary of HEW to prescribing part C regulations no more restrictive than those in effect for claims filed on June 30, 1973 ("interim" standards). The Senate amendment authorized the Secretary of Labor to promulgate new medical standards to be applied to all part C claims and retained the standard-setting authority of the Secretary of HEW with respect to part B claims. The Senate amendment further provided that the Secretary of Labor, in consultation with NIOSH, would establish criteria for medical tests consistent with the definition of total disability.

The conference substitute conforms to the Senate amendment with the proviso that the so-called "interim" part B medical standards are to be applied to all reviewed and pending claims filed before the date the Secretary of Labor promulgates new medical standards for part C cases.

The conferees intend that the Secretary of Labor shall promulgate regulations for the determination of total disability or death due to pneumoconiosis. With respect to a claim filed or pending prior to the promulgation of such regulations, such regulations shall not provide more restrictive criteria than those applicable to a claim filed on June 30, 1973, except that in determining claims under such criteria all relevant medical evidence shall be considered in accordance with standards prescribed by the Secretary of Labor and published in the Federal Register.

The conferees also intend that all standards are to incorporate the presumptions contained in section 411(c) of the Act.

The House bill amended section 413 to provide that a claim cannot be rejected solely on the basis of current employment as a miner if (1) the miner's work location has recently been changed to a less dusty area; (2) the nature of employment has been changed to be less rigorous; or (3) the nature of employment has been changed to result in receipt of substantially less pay.

The Senate amendment modified the definition of "total disability" to provide that: (1) a deceased miner's employment in a mine at the time of death is not conclusive evidence that the miner was not totally disabled; and (2) a living miner's employment with changed employment circumstances indicating a reduced ability to do his usual coal mine work, is not conclusive evidence that the miner is not totally disabled.

The conference substitute conforms to the Senate amendment. By this amendment, the conferees intend to conclusively establish what is already implicit in current law; that is, that mere status as an employee is not always accompanied by the absence of total disability (within the meaning of the Act). It is in response to the administrative practice of denying claims solely on the basis of employment status

without regard to the type of work being performed. The amendment thus identifies certain situations which may suggest the existence of legal disability notwithstanding continued employment status and where additional administrative inquiry is therefore directed.

The House bill also provided that a miner could file a claim for benefits regardless of whether the miner was currently employed and that the Secretary of Labor could advise the miner if he would be eligible for benefits if he changed the circumstances of his work. The Senate amendment did not contain these provisions.

The conference substitute does not include the House provision since the provision would essentially duplicate authority provided elsewhere in the conference substitute, arising out of identical provisions in the House bill and Senate amendment, which prohibits benefit payments to employed miners (except those afflicted with complicated pneumoconiosis, as described by section 411(c)(3)), but permits a miner to receive benefits if his employment terminates within 1 year after he is determined to be otherwise eligible for benefits.

EVIDENCE

Affidavits

The House bill provided that where there is no relevant medical evidence in the case of a deceased miner, affidavits shall be considered sufficient to establish eligibility. The Senate amendment provided that in the case of a deceased miner, where there is no medical evidence or where such evidence is inconclusive, a claim shall be approved if other evidence in the record, including affidavits, taken as a whole, establishes eligibility.

The conference substitute conforms to the House provision with a Senate amendment that affidavits are sufficient to establish eligibility in the case of a deceased miner where there is no medical "or other" relevant evidence.

X-ray rereading prohibition

The House bill required the Secretary to accept the opinion of a claimant's physician regarding whether the miner's X-ray shows pneumoconiosis unless the Secretary has good cause to believe the X-ray is not of sufficient quality, or the miner's condition is being fraudulently represented. The Senate amendment provided that if the miner is employed for 25 or more years in the mines and there is other evidence of pulmonary or respiratory impairment, the Secretary must accept the reading of a board-certified or board-eligible radiologist if the X-ray is of sufficient quality and is taken by a radiologist or a qualified radiologic technologist or technician, except where the Secretary has reason to believe that the claim has been fraudulently misrepresented. The Secretary of Labor may by regulation establish specific requirements for techniques used to take X-rays.

The conference substitute generally conforms to the Senate provision except that the limitation on the prohibition as it pertained to claims of miners with 25 or more years of mining employment contained in the Senate amendment is deleted. In the case of X-rays read by a board-certified or board-eligible radiologist it is the intention of the conferees that the Secretary shall accept, for whatever evidentiary value X-rays generally may have, the evaluation of such X-rays read by a board-certified or board-eligible radiologist without submitting them to a further rereading.

Autopsy reports

The House bill provided that the Secretary must accept an autopsy report for purposes of determining the presence of pneumoconiosis and the stage of advancement of pneumoconiosis, unless the Secretary has good cause to believe it is not accurate, or that the miner's condition is being fraudulently misrepresented. The Senate amendment did not contain these provisions.

The conference substitute conforms to the House bill.

Pulmonary examination

The Senate amendment required that miners be provided an opportunity to substantiate their claims by means of complete pulmonary examinations. The House bill contained no such provision.

The conference substitute adopts the Senate provision with an amendment to clarify that the miner-claimant has the right to insist on a complete pulmonary examination in substantiating the claim. The conferees recognize that complete pulmonary examinations, including blood gas tests, may be an especially important tool in diagnosing total disability due to pneumoconiosis for miners in certain cases, such as high-altitude miners. In adopting this provision, the conferees intend that in evaluating claims, all relevant evidence be considered, but that no claim may be denied unless the claimant has been offered the opportunity to substantiate his claim by means of such pulmonary examinations (except where it is determined in consultation with the miner's physician that such test is medically contraindicated) and the miner has been given a reasonable period of time to avail himself or herself of such opportunity. The conferees do not intend by this provision, however, that any single medical test be given priority in establishing total disability due to pneumoconiosis.

BENEFIT ELIGIBILITY

Survivor presumption

The Senate amendment entitled the survivor of a miner who died before the date of enactment of the 1977 amendments and who had at least 25 years of coal mine employment prior to June 30, 1971, to benefits, unless it is established that, at the time of death, the miner was not partially or totally disabled due to pneumoconiosis. The survivor was required upon request to supply the Secretary with available evidence concerning the health of the miner at the time of death. The House bill had no equivalent provision.

The conference substitute adopts the Senate provision.

Mine accident provisions

The House bill provided that if a miner was employed 17 years or more in underground coal mines and died as a result of an accident in any such coal mine which occurred before June 30, 1971, an eligible survivor would be entitled to part B black lung benefits. The Senate amendment had no comparable provision.

The conference substitute does not contain this provision.

Determination of year of employment

The Senate amendment provided that a miner would be credited with a year of employment if the miner had four quarters of coverage as defined in the Social Security Act, was continuously on the payroll of a coal company, or if the Secretary of Labor determined on the basis of other evidence that he was employed as a miner. The House bill had no comparable provision.

The conference substitute does not contain this provision.

Use of 15-year presumption

The House bill did not modify current law under which part C claimants, in order to use the section 411(c)(4) presumption of total disability due to pneumoconiosis, must have worked 15 years in the coal mines prior to June 30, 1971, and have filed the claim within 3 years of last exposed employment in a coal mine for a living miner and within 15 years of last exposed employment in a coal mine in the case of a survivor's claim. The Senate amendment eliminated all time limitations on the use of the section 411(c)(4) presumption.

The conference substitute conforms to the Senate amendment.

Statute of limitations

The House bill provided that, in addition to the provisions of current law under which a part C claim may be filed within 3 years of discovery of total disability due to pneumoconiosis or within 3 years of death due to pneumoconiosis, a part C claim may also be filed within 3 years of the date of enactment of these amendments. The Senate amendment permitted the filing of a part C claim by a miner within 3 years after a medical determination of total disability due to pneumoconiosis, and eliminated the statute of limitations on survivor claims.

The conference substitute conforms to the Senate provision with an amendment which would also permit the filing of a part C claim within 3 years of the date of enactment of these amendments.

Survivors of approved claimants

The Senate amendment provided that the eligible survivors of approved claimants would not be required to file a new claim for benefits. The House bill had no comparable provision.

The conference substitute conforms to the Senate amendment.

Medical benefits

The House bill required the Secretary of HEW to notify miners receiving benefits under part B of their eligibility to file for medical benefits under part C. Such miners would then have 6 months to file a part C claim for medical benefits, without regard to the current 3-year statute of limitations. The Senate amendment had no comparable provision.

The conference substitute adopts the provision of the House bill. The conferees intend that the so-called "interim" part B medical standards are to be applied to all of these medical benefits claims.

Applicability of 1977 part B amendments to part C

The Senate amendment made these amendments to part B applicable to part C where relevant. The House bill had no comparable provision. The conference substitute conforms to the Senate amendment. Neither this provision nor any other provision in the conference substitute eliminates or narrows the current applicability of all part B presumptions to part C claims. Indeed, it is the express intent of the conferees to expand the regulatory authority of the Department of Labor in administering the black lung benefits program.

NOTIFICATION AND REVIEW

Notification

The House bill provided that the Secretaries of Labor and HEW would disseminate to interested persons and groups information on changes in the law. Each Secretary would undertake a program to give individual notices. The Secretary of HEW would locate and notify individuals with long periods of coal mine employment or their survivors of their eligibility to file a part B claim if they had not previously filed a part B or part C claim and such persons could file claims within 6 months of notification.

The Senate amendment required the Secretaries of Labor and HEW to disseminate jointly to interested persons and groups information on changes in the law, and through group organizations and operators to undertake to notify individuals. Individual assistance was to be provided to potential beneficiaries.

The conference substitute conforms to the House bill with an amendment to delete any requirement that a delegate of the Secretary personally visit individuals to inform them of their eligibility for benefits. Also deleted is the provision in the House bill permitting the reopening of part B to "notified" potential claimants. In addition, as discussed below, the Secretary of HEW will notify denied part B claimants and the Secretary of Labor will notify denied part C claimants of their review rights and, with regard to part C claimants, of their right to augment their files. The conference substitute also retains the Senate provision requiring that individual assistance be provided to potential beneficiaries. The conferees intend that the Secretaries undertake a broad campaign to disseminate information about the changes in the program and to notify individuals who may have become eligible for benefits, through appropriate organizations, groups, and coal mine operators.

Review

The House bill provided that the Department of Health, Education, and Welfare would automatically review all previously denied or pending part B claims and that the Department of Labor would likewise review all previously denied or pending part C claims to determine if the respective claimants would be eligible for benefits in light of the 1977 amendments. The Senate amendment provided that

claimants with previously denied claims would be permitted to refile under part C under an expedited procedure to be established by the Secretary of Labor.

The conference substitute adopts the requirement of the House bill of entitlement to review of all denied or pending claims (part B and part C) taking into account the changes made by these amendments. It requires the Department of HEW to notify individuals whose part B claims have been denied or are pending that they may elect to have HEW review the claim on the existing record or have the claim referred to the Department of Labor for refiling under part C with an opportunity to submit new evidence. Where the claimant elects review under part B and the Department of HEW finds the claimant eligible in light of these amendments, or for other reasons, the Secretary of HEW is to certify this determination to the Secretary of Labor. This certification is binding upon the Secretary of Labor as an initial determination of eligibility and the Secretary of Labor is required to immediately make or otherwise provide for the full payment of the claim in accordance with relevant part C provisions.

Where the claimant elects review under part B and the Department of HEW does not find the claimant eligible for benefits on the existing record, the claim will be referred to the Secretary of Labor for refiling under part C, and consideration thereunder (including the opportunity to submit new evidence), and the claimant is notified by HEW of that referral. Once the Secretary of HEW makes the determination of claim approval or denial based on review on the existing record, the responsibility for further review action on any such claim is transferred to the Secretary of Labor. This also includes the situation where a claimant is dissatisfied with the scope or terms of an HEW approval (e.g., dispute regarding augmentation of benefits because of dependents). The Department of HEW is thus expressly relieved of providing an administrative process for appeal from its determinations under these provisions and that responsibility rests with the Department of Labor.

Where the claimant does not elect review under part B, but elects to have the claim referred to the Department of Labor for refiling under part C, HEW shall so notify the Secretary of Labor and shall promptly provide the Secretary with the claimant's case file, and all pertinent information necessary to further process the claim. With respect to all claims referred by HEW to the Secretary of Labor, and thus refiled as part C claims, the Secretary of Labor shall provide an opportunity for the claimant to present additional medical or other evidence in support of the claim and shall notify each claimant of that opportunity.

The conference substitute also requires the Secretary of Labor to automatically review all currently denied or pending part C claims, taking into account the changes made by these amendments. The Secretary is required to immediately make or otherwise provide for the full payment of claims approved under these provisions in accordance with relevant part C provisions. If the evidence on file is not sufficient for approval of a claim, the Secretary shall provide an opportunity for the claimant to present additional medical or other evidence in support of the claim and shall notify each claimant of that opportunity. If a claim is denied on review on the existing record, the claimant shall once again be informed of his right to submit additional evidence in support of the claim under part C.

All reviews or refiled claims shall receive expedited treatment. The conferees also expect the Secretaries of HEW and Labor to establish a satisfactory mechanism to coordinate their responsibilities and to avoid both agencies simultaneously reviewing the claim of any claimant previously denied under part B and later denied, pending, or entitled under part C. The conferees expect the Secretary of HEW to administer the "interim" standards with a view to the just accomplishment of the purpose of allowing for reviewed part B claims to establish disability within the meaning of the 1977 amendments as they apply to all reviewed part B claims.

For purposes of payment of benefits, all claims under review shall be treated as part C claims and shall be subject to relevant part C

provisions which require payment of benefits by a coal mine operator, other employer, or by the trust fund established by the Black Lung Benefits Revenue Act of 1977.

Retroactivity

The House bill provided no payment retroactivity pursuant to review. The Senate amendment provided that a part B denial, refiled as a part C claim and approved, would be paid from January 1, 1974, as would a denied section 415 claim (that is, a claim filed between July 1 and December 31, 1973). A previously denied part C claim approved after refiling would be paid benefits from the date of original filing.

The conference substitute conforms generally to the Senate amendment with an amendment which does not alter the current law regarding retroactivity of benefits payments but which precludes any retroactivity of benefits for a period prior to January 1, 1974.

Pre-1970 employment

The House bill reopened part B (claims paid out of general revenues) for all claims predicated upon employment which terminated prior to December 30, 1969. The Senate amendment provided that any approved part C claim based upon coal mine employment which terminated prior to January 1, 1970, was to be paid by the trust fund established by the Senate amendment. The Senate amendment did not permit newly filed claims under part B.

The conference substitute conforms to the Senate amendment. The responsibility for payment of part B claims approved upon review pursuant to these amendments is dealt with elsewhere in the conference substitute.

Successor operator

The Senate amendment added to current law a requirement that, on or after January 1, 1970, if an operator reorganizes to change its identity, form, or place of organization, is liquidated into a parent corporation, or ceases to exist because of a sale of assets, merger, consolidation, or division, the successor operator or corporation is liable for claims based on coal mine employment for the predecessor operator, except that a predecessor operator shall be primarily liable if the predecessor operator remains a coal mine operator and is financially responsible for the payment of the claim. The House bill had no such provision.

The conference substitute conforms to the Senate amendment.

CLAIMS ADJUDICATION

Procedures

The House bill retained provisions under current law by which the Longshoremen's and Harbor Workers' Act procedures applied with respect to claims processed by the Secretary of Labor. In addition, the House bill added provisions establishing a new hearing procedure which required an expedited hearing within 45 days if requested by a claimant. The House bill also required the claimant's appeal from a final decision of the Secretary to be taken to a U.S. district court. The standard of review applied by the district court would have been "weight of the evidence".

The Senate amendment retained the Longshoremen's Act procedures for the adjudication of all claims processed by the Secretary of Labor but permitted the use of hearing officers for a period of 1 year. It also made future amendments to Longshoremen's Act procedures automatically applicable to black lung claims.

The conference substitute conforms to the Senate amendment. For purposes of adjudication, all claims certified, referred, or otherwise subject to review by the Secretary of Labor under section 435, shall be treated as part C claims.

Participation

The House bill provided that no operator may participate in the adjudication of any claim. The trustees of the fund (established by the House bill) could participate in the claims process on behalf of all operators only to the extent that they could appeal a prior de-

cision, and medical determinations of the Secretary would not be appealable. If the trustees appealed a decision their appeal would be taken to the appropriate court of appeals.

The Senate amendment provided that only the Secretary and the claimant may participate in proceedings for which the trust fund may be liable. Neither the fund nor any operator could participate in any trust fund claim initially or on appeal. The Senate amendment made the Secretary of Labor a party in any part C proceeding and retained the current authority for operators to participate in claims adjudication with respect to claims for which they might be responsible.

The conference substitute conforms to the Senate amendment in the respect that the Secretary of Labor is a party in any part C proceeding and in retaining the authority of current law for operators to participate in the adjudication of claims for which they may be individually found liable (including part B claims certified or otherwise referred to the Secretary of Labor by the Secretary of HEW pursuant to the conference substitute). The balance of the Senate provision is incorporated in the provisions of the Black Lung Benefits Revenue Act of 1977, a prior and separate enactment dealing generally with the trust fund financing mechanism for the Black Lung Benefits Act.

Enforcement of operator liability to claimants

The House bill did not modify current law under which the failure of an operator to pay a claimant results in payments by the Secretary of Labor made on behalf of such operator. The Secretary may bring a civil action for recovery. Pursuant to incorporated Longshoremen's Act provisions, the operator may be required to pay the claimant 20 percent in addition to compensation if timely payments are not made. There is no penalty for failure to insure.

The Senate amendment provided that the failure of an operator to pay a claimant would result in payments being made by the trust fund. If the operator refused to repay the fund, there would be a lien against such operator's assets, enforceable in a U.S. district court. The operator would also be liable for the payment of a 20 percent penalty to the claimant pursuant to the Longshoremen's Act. A civil penalty of up to \$1,000 a day would be provided for failure of an employer to secure benefits and corporate officers would be made jointly and severally liable. Criminal penalties would be imposed against an operator who knowingly destroyed or encumbered his property to avoid paying benefits. Other penalties would be imposed by the Senate amendment for the filing of false statements. The Secretary would be authorized to require employers to file reports concerning who may be entitled to benefits. Failure to file such reports would be subject to a civil penalty.

The conference substitute conforms to the Senate amendment with regard to its provisions establishing penalties for failure to secure payment of benefits and for false statements and reports. The balance of the Senate provision (e.g., trust fund liability, lien provisions) is incorporated in the provisions of the Black Lung Benefits Revenue Act of 1977 (discussed above).

The conferees intend that the Secretary of Labor fully utilize the regulatory authority under which he or she may require reports of employers (regarding black lung beneficiaries or potential beneficiaries) to collect broad statistical data and to monitor the status of individual or groups of claims.

Enforcement of operator liability to fund

The House bill provided that if an operator failed or refused to pay an assessment or premium to the fund, the trustees would be authorized to bring a civil action against such operator in an appropriate U.S. district court. Nine percent interest could be assessed on past due balances. In addition, the Secretary of the Treasury could assess penalties not in excess of unpaid premiums and assessments to be paid by a defaulting operator. Penalties could be recovered by the Secretary of the Treasury in an appropriate U.S. district court, and would be paid into the fund.

The Senate amendment provided that if an operator failed to pay his designated 1 percent sales tax or repay the fund for the amounts paid on such operator's behalf, there would be either a default in tax liability declared by the Internal Revenue Service or in the latter case

a lien imposed pursuant to provisions of the Internal Revenue Code of 1954. Such lien would be enforced by the Secretary of Labor in a U.S. district court.

The conference substitute does not contain either provision since the provision of the Senate amendment is incorporated in the provisions of the Black Lung Benefits Revenue Act of 1977, a prior and separate enactment (discussed above).

Administration

The House bill established a coal industry administered fund, the trustees of which would be elected by coal mine operators. The operator trustees administered and managed the fund and were authorized to invest the corpus in accordance with ERISA limitations. The Senate amendment established a trust fund and provided that the trustees of the fund would be the Secretaries of Treasury, Labor, and HEW, with the Secretary of the Treasury the managing trustee. Assets of the fund would be invested only in public debt securities.

The conference substitute does not contain either provision since the provision of the Senate amendment is incorporated in the provisions of the Black Lung Benefits Revenue Act of 1977 (discussed above).

Payments

The House bill provided that the trust fund would pay the full cost of all part C claims including reimbursing the Federal Government for any payments made after December 31, 1973, for claims filed after June 30, 1973, and authorized the trust fund to assume payment of the obligations (in return for reasonable payment) of insurance carriers or operators who incurred a prior obligation under this part. The fund would pay only its own administrative expenses.

The Senate amendment provided that the trust fund would pay all part C claims which are predicated upon employment which terminated prior to January 1, 1970, and claims with respect to employment after that date where no responsible operator can be found or the miner's coal mine employer is insolvent or uninsured. The fund would also reimburse the Treasury for all part C claims paid by the Federal Government prior to enactment of these amendments with respect to periods of eligibility from January 1, 1974. The fund would pay the administrative expenses of Labor, HEW, and Treasury.

The conference substitute provides that the trust fund (established by the Black Lung Benefits Revenue Act of 1977) pays benefits in cases in which there is no operator who is required to secure the payment of such benefits or where a liable operator has failed to make payment in a timely manner or cases in which the miner's last coal mine employment was before January 1, 1970 (irrespective that in cases reviewed under section 435 the claims was initially filed as a part B or part C claim). The balance of the Senate amendment is incorporated in the provisions of the Black Lung Benefits Revenue Act of 1977 (discussed above).

Financing

The House bill provided that the trust fund would be supported by premiums and assessments payable by each coal mine operator in the United States, except where a State law has been certified. The amount of the premium would be established in the first year by the Secretary of Labor predicated upon the tons of coal mined by each such operator. In following years, the premium would be established by the trustees subject to modification by the Secretary. Premiums would have to be sufficient to meet the obligations of the fund. Premium rates would be uniform throughout the coal mine industry. Premiums due and payable would be collected by the Secretary of the Treasury in the same manner as quarterly payroll reports of employers, and penalties could be assessed by the Secretary of the Treasury for failure to pay premiums. In addition to the annual premiums, assessments would also be required to be paid into the fund by individual coal mine operators at the end of each year in an amount which would be equal to the claim liability experience of such operator.

The Senate amendment established a trust fund on the books of Treasury, supported by a uniform 1 percent ad valorem manufacturers

excise tax on coal (other than lignite) sold by producers after September 30, 1977. Claims for which there is a responsible operator would be financed through insurance or self-insurance, as under current law.

The conference substitute makes reference to the Black Lung Disability Trust Fund established by the Black Lung Benefits Revenue Act of 1977 (discussed above). The financing mechanism for the trust fund, as prescribed in the Revenue Act, conforms generally to the Senate amendment, except that the tax is based upon the tonnage of coal mined by coal operators (as in the House bill) at the rate of \$0.50 per ton for underground coal and \$0.25 per ton for surface-mined coal (but not to exceed 2 percent of the price at which the ton of coal is sold by the producer). The conference substitute does continue the current law regarding the individual liability of responsible operators (except where the miner's last coal mine employment was before January 1, 1970).

MISCELLANEOUS

Insurance

The Senate amendment created a black lung compensation insurance fund in the Department of Labor to enable the Secretary of Labor to offer insurance to operators if such insurance is unavailable privately at reasonable cost. The Senate amendment further authorized repayable advances to the insurance fund. The insurance fund would charge premiums consistent with accepted actuarial principles. The House bill had no such provision.

The conference substitute conforms to the Senate amendment. It is the intent of the conferees that the insurance fund not be operated solely as an insurer of a high-risk pool. The Secretary is also expected to utilize this authority to assist in encouraging private insurers to make contract insurance widely available at reasonable costs.

Field offices

The House bill required the Secretary of Labor to establish field offices. The Senate amendment authorized the Secretary of Labor to establish field offices.

The conference substitute conforms to the House bill with an amendment authorizing the Secretary of Labor to enter into agreements to use the facilities of other Federal or State agencies in establishing such field offices, and to use such facilities and also personnel if necessary in lieu of establishing separate field offices where separate Labor Department staffed field offices are not feasible. The conferees intend that, while the Secretary of Labor establish field offices wherever there are sufficient claimants in need of assistance, the Secretary not be required to maintain separately staffed field offices in locales where there is likely to be an insufficient number of claimants to justify their continued existence.

Occupational disease study

The House bill provided that the House Education and Labor Committee would conduct a study of white lung disease in 1 year. The Senate amendment required the Secretary of Labor, in cooperation with NIOSH, to conduct an 18-month study of all occupationally-related pulmonary and respiratory diseases.

The conference substitute conforms to the Senate amendment.

Information to denied claimants

The Senate amendment required the Secretary of Labor to supply each denied claimant with a written statement of the reasons for such denial and a summary of the administrative hearing record or, on a showing of good cause, a copy of any transcript thereof. The House bill had no such provision.

The conference substitute conforms to the Senate amendment.

Interim part C payments

The House bill provided that part C benefits would be paid by the Secretary in any case in which the Black Lung Disability Insurance Trust Fund was not in operation. The Senate amendment had no such provision.

The conference substitute conforms to the House bill except that the reference is to the Black Lung Disability Trust Fund established

by the Black Lung Benefits Revenue Act of 1977 (discussed above). The intent underlying this provision is to essentially "revive" the payment provisions of the current law in the event payments cannot lawfully be made from the trust fund. An example (and perhaps the only imaginable eventuality which could trigger this provision) would be a Supreme Court finding of legal infirmity going to an aspect of the trust fund sufficient to prevent the trust fund from adequately assuming the purpose and responsibility for which it was established.

Retroactivity—State exemption

The House bill made no change in the current law under which a State could gain an exemption for its operators from the provisions of the Federal statute if the State enacts a black lung compensation law which the Secretary of Labor could certify as meeting the Federal statutory standards. Such standards required *inter alia* State law coverage for miners last employed before enactment. The Senate amendment modified the existing law to permit the Secretary of Labor to approve State laws which provided coverage for miners whose last employment to minutes after the Secretary's approval of such State law.

The conference substitute conforms to the provisions of the Senate amendment with an amendment to clarify the intent of the conferees that operators in certified States under the Federal statute would still be required to secure the payment of benefits pursuant to Federal law with respect to miners whose last employment in coal mining terminated before the Secretary's approval of the State law. It is the intent of the conferees that no miner currently covered by the Federal statute be denied coverage under either the Federal statute or a certified State law because of the operation of this provision. Operators in certified States would nonetheless be liable for the coal excise tax imposed by the Black Lung Benefits Revenue Act of 1977, and miners whose employment ceased before the State law was certified would be paid pursuant to the operation of the Federal law.

Self-insurance

The Senate amendment provided specific income tax treatment for a qualifying trust used by a coal mine operator to self-insure for liabilities under Federal and State black lung benefits laws, and allowed deductions within certain limits for amounts contributed to the trust by the operator. The Senate amendment further imposed certain investment limitations and prohibitions on "self-dealing" and "taxable expenditures" designed to prevent abuses of such trusts. The Senate amendment provisions would be effective for taxable years beginning after December 31, 1977. The House bill contained no such provision.

The conference substitute does not contain this provision although it is incorporated in the provisions of the Black Lung Benefits Revenue Act of 1977 (discussed above).

Addresses

The Senate amendment amended section 6103 of the Internal Revenue Code of 1954 to allow the IRS to provide NIOSH with addresses of taxpayers for purposes of locating individuals who may have been exposed to occupational hazards. The House bill contained no such provision.

The conference substitute does not contain this provision because this provision was included in the Act of December 13, 1977 (Public Law 95-210; 91 Stat. 1485), an amendment to the Social Security Act to provide payment for rural health clinic services.

Location of Division of Coal Mine Workers' Compensation

The House bill provided that the Division of Coal Mine Workers' Compensation would be located in the Office of the Secretary of Labor. The Senate amendment had no such provision.

The conference substitute does not contain this provision from the House bill.

Effective dates

The House bill provided generally that the bill would take effect on the date of enactment. The House bill also contained additional

effective dates relating to the manner in which the funding provisions of the House bill would take effect. The Senate amendment contained similar provisions for a generally applicable effective date on the date of enactment, with additional effective date provisions relating to funding.

The conference substitute provides that the amendments will take effect on the date of enactment. Additional effective dates relating to funding were made unnecessary as a result of the enactment of the Black Lung Benefits Revenue Act of 1977 (discussed above).

EXPLANATION OF FINAL RULES FOR REVIEW OF DENIED AND PENDING CLAIMS UNDER THE BLACK LUNG BENEFITS REFORM ACT (BLBRA) OF 1977

PART 410—FEDERAL COAL MINE HEALTH AND SAFETY ACT OF 1969, TITLE IV

Subpart E—Payment of Benefits

Subpart F—Determinations of Disability, Other Determinations, Administrative Review, Finality of Decisions, and Representation of Parties

Subpart G—Rules for the Review of Denied and Pending Claims Under the Black Lung Benefits Reform Act (BLBRA) of 1977

REVIEW OF DENIED AND PENDING CLAIMS UNDER THE BLACK LUNG BENEFITS REFORM ACT OF 1977

AGENCY: Social Security Administration, HEW.

ACTION: Final rule.

SUMMARY: These amendments implement provisions of recent legislation affecting the black lung benefits program. Included in these amendments are: (1) Broader definitions of "miner" and "pneumoconiosis," (2) modified evidentiary requirements, (3) procedures relating to the requirement that each claimant whose claim has been denied or was pending as of March 1, 1978, be given the opportunity to have the claim reviewed under the revised evidentiary requirements; and (4) other substantive changes made by the recent legislation. These rules explain the revised statutory and evidentiary provisions of the law and the role of the Social Security Administration (SSA) in the review of denied and pending part B claims.

DATES: Effective August 7, 1978.

FOR FURTHER INFORMATION CONTACT:

Harry Short, Legal Assistant, Social Security Administration, 6401 Security Boulevard, Baltimore, Md. 21235, telephone 301-594-7455.

SUPPLEMENTARY INFORMATION: On June 6, 1978, a notice of proposed rulemaking and proposed amendments to subparts E, F, and G of regulations No. 10 were published in the *FEDERAL REGISTER* (43 FR 24542).

The Black Lung Benefits Reform Act (BLBRA) of 1977: (1) Broadens the definitions of "miner" and "pneumoconiosis" for purposes of establishing entitlement to black lung benefits, (2) modifies the standards used to determine whether a miner is or was totally disabled due to pneumoconiosis or whether the miner's death was due

to pneumoconiosis, (3) requires that each person who has had a claim for black lung benefits denied or whose claim for black lung benefits is pending be given the opportunity to have the claim reviewed under the revised statutory and evidentiary requirements; and (4) makes certain other substantive changes in the Federal Coal Mine Health and Safety Act of 1969, as amended.

REVIEW OF PENDING AND PREVIOUSLY DENIED CLAIMS

The Department of Health, Education, and Welfare's Social Security Administration and the Department of Labor's Office of Workers' Compensation Programs (OWCP) are responsible for the review of pending and denied claims under the new law. SSA may consider only the evidence on file as of March 1, 1978. Evidence on file is evidence actually in a person's SSA part B black lung claims folder and includes the individual's earnings record on file with SSA. The OWCP may accept the evidence in the claims file, and any additional evidence, if the evidence on file is not sufficient for approval of the claim.

SSA will notify each claimant, whose part B claim has been denied by or is pending in SSA or the courts, that upon his or her request the claim will be reviewed under the new law. Where the claimant is deceased those persons who may be entitled to benefits as a survivor of the claimant have the right to elect review of a denied or pending claim. The claimant will have 6 months from the date notification is sent to exercise the review option and will be given the opportunity to select either SSA or OWCP to review the claim. If entitlement to benefits is established under the new law, benefits will be paid under part C of the act. Such benefits may be paid back to January 1, 1974.

Part B claims pending before SSA or the courts will continue to be processed under the old law for payment of benefits under part B, including benefits for periods prior to January 1, 1974, at the same time that the claims are being reviewed at the claimant's request by either SSA or OWCP under the BLBRA of 1977. Claimants would then have two separate and independent claims pending for benefits.

Election by claimants to have their pending claims reviewed by either the SSA or the OWCP under the BLBRA of 1977 for payment of benefits back to January 1, 1974, will not affect the processing of their pending part B claims under the old law for payment of benefits under part B.

Claimants selecting review by SSA will be notified by SSA of the initial

decision. Following SSA's determination, whether or not the claim is approved, it becomes the responsibility of the OWCP and is forwarded to them. They will be responsible for assigning liability for payment of benefits. If a claimant disagrees with any part of SSA's initial decision of approval and wishes to have it reviewed, the claimant must request review by OWCP. If SSA does not approve the claim, OWCP will then review it and provide opportunity for the claimant to submit additional evidence, if the evidence then in file is insufficient to approve the claim.

BROADENED DEFINITIONS OF MINER AND PNEUMOCONIOSIS

These regulations redefine the term "miner" to include self-employed miners and individuals who work or have worked in coal mine construction or transportation in or around a coal mine or coal preparation facility to the extent they were exposed to coal dust as a result of their employment. The term "pneumoconiosis" is amended to include its sequelae, including respiratory and pulmonary impairments.

REVISED EVIDENCE REQUIREMENTS AND MODIFIED DISABILITY STANDARDS

These new rules: 1. Prohibit the re-reading of an X-ray previously submitted by the claimant in support of a claim if the X-ray was taken by a radiologist or qualified technician and interpreted by a board certified or board eligible radiologist, and there is other evidence of a pulmonary or respiratory impairment. This rule will not apply if there is evidence of fraud or the X-ray is not of good enough quality to demonstrate the presence of pneumoconiosis.

2. Provide that autopsy reports shall be accepted for the purpose of determining pneumoconiosis unless there is evidence of fraud or inaccuracy in the report.

3. Provide that, in the case of a deceased miner where there is no medical or other relevant evidence, affidavits will suffice to establish total disability or death due to pneumoconiosis.

4. Provide that coal mine employment at the time of death of a deceased miner shall not be used as conclusive evidence that the miner was not totally disabled.

5. Provide that if the work conditions of a living miner indicate a reduced ability to do the miner's usual work, his or her coal mine employment shall not be used as conclusive evidence that the miner is not totally disabled.

6. Provide that no miner who is engaged in coal mine employment (except those with complicated pneumoconiosis) shall be entitled to any benefits while so employed. Any miner who has been determined to be eligible for benefits because of a claim filed while such miner was engaged in coal mine employment shall be entitled to such benefits if his or her employment terminates within 1 year after the date the determination becomes final.

7. Provide that State workmen's compensation payments will be cause for reducing a miner's black lung benefits only where the State payments are payable based on pneumoconiosis.

8. Provide that survivors of miners who died on or before December 31, 1973, can receive benefits under part B if the miner had 25 years or more of employment in a coal mine prior to June 30, 1971, unless it can be proved that the miner was not partially or totally disabled due to pneumoconiosis at the time of death.

OTHER MAJOR CHANGES

These rules also provide: 1. That the Social Security Act (title II) procedures for permitting survivors to negotiate jointly payable checks may be used in the black lung benefits program.

2. Penalties for fraud.

3. That SSA will notify miners entitled to benefits under part B of title IV of the Federal Coal Mine Health and Safety Act of 1969 (the act), as amended, of their potential eligibility to medical services and supplies under part C of title IV of the Federal Coal Mine Health and Safety Act of 1969, as amended.

Claimants who have part B claims which are pending or have been denied and who request review of these claims under the BLBRA of 1977 may need to refer to both SSA and DOL regulations. Department of Labor regulations were published with a notice of proposed rulemaking on April 25, 1978. (See 43 FR 17722-17773 and a correction at 43 FR 19863, May 9, 1978.)

COMMENTS ON NOTICE OF PROPOSED RULEMAKING

Interested parties were given the opportunity to submit data, comments, or arguments within 30 days with regard to the proposed amendments.

Four groups have submitted comments. A labor organization is concerned that the section dealing with jointly payable checks is not sufficiently detailed to enable a surviving payee to determine how to proceed following the death of the joint payee. This procedure, while new to the black lung benefit program, is in accord with established SSA procedures for other benefit programs. It is generally handled by local social security offices; since the regulation directs the surviving payee to these offices, we do not

anticipate that the lack of specific instructions in the regulation section will cause any hardship. This same group is concerned because our definition of pneumoconiosis does not specifically include cancer or diseases of bacteriological or viral origin. However, to the extent that these diseases constitute a respiratory or pulmonary impairment arising out of coal mine employment, they are included in the prior definitions of pneumoconiosis. From the context of the comments we believe the writer fully understands this and was merely suggesting more specificity. We feel this is not necessary. It is not intended of course that any cancer or disease of bacteriological or viral origin not affecting the respiratory or pulmonary systems or not arising out of coal mine employment be included.

The same group feels that the regulation section dealing with the question of the disability of a working miner should be amended so as to assure the miner an opportunity to be examined and informed of the results even though still working. The proposal, as stated by the writer, would require development of evidence and this is not permitted under SSA's limited role in the provisions of the BLBRA.

Mention was also made of problems encountered in assuring coverage of strip and auger miners; however, this comment was not specifically directed at the proposed regulations. By defining a miner as any person who works or has worked in or around a coal mine our regulations do encompass these two groups.

This same commentator and medical group have suggested several changes with regard to X-ray rereadings. First, these commentators point out that the term "board eligible" has a highly technical meaning and recommend it be deleted from our regulations. However, since the term appears in the law we have no authority to delete it from our regulations.

Second, both of these commentators have suggested that the prohibition against X ray rereadings apply if the initial reading was done by a government "B" reader. However, the law requires that the initial reading be performed by a "board eligible" or "board certified" radiologist for the prohibition to apply. If the "B" reader meets this requirement then the prohibition against rereading applies. Accordingly, the inclusion of a provision covering "B" readers is not necessary to these regulations. Third, one writer feels that the requirement that other evidence of a respiratory or pulmonary impairment be present for the X-ray rereading prohibition to apply is too restrictive. As the writer pointed out, however, this section of our regulations does comply with the law. Fourth, some concern was expressed with regard to the absence in the proposed regulations of a reference to the

1971 International Labor Office (ILO) classification of chest radiographs. The 1971 ILO classification has already been published in 20 CFR 410.428 and, of course, applies to the review mandated by the BLBRA.

A contractors' association has recommended that the definition of miner contained in §410.702(h) be amended to provide that coal mine construction workers be considered miners only to the extent that they are exposed to coal dust conditions substantially similar to underground coal mining and not merely to the extent of coal dust exposure in or around a coal mine. The commentator's view follows substantially that of the report of the Senate Human Resources Committee which accompanied S. 1538. However, we cannot accommodate this suggested change. This regulation section is in conformity with the law and follows the guidance provided by the House and Senate Conference Committee as expressed in their report dated February 2, 1978. This same commentator expressed regret that a hearing was not held on these regulations. Because of the statutory requirement that final regulations be published no later than the end of the fourth month following the month in which the BLBRA of 1977 was enacted there was insufficient time for hearings.

A black lung association group pointed out, with regard to reduction of a person's benefits because of receipt of workmen's compensation payments, that there may be cases where a miner is receiving State payments based partly on pneumoconiosis and partly on another impairment. This is a procedural matter and we are providing for such an event in our operating instructions. We have adopted a suggestion made by this same group and have amended §410.591 to show the outcome of a claim for medical benefits under part C will not jeopardize a person's eligibility for part B benefits. They also suggested that, with regard to §410.699a, penalties be imposed on persons making false statements for the purpose of preventing benefits as well as on the person making false statements for the purpose of obtaining benefits. Section 12(a) of the BLBRA only provides for penalizing individuals who make false statements in order to obtain benefits; hence, we cannot accommodate this suggestion. The group also felt that §410.701 should explicitly state that evidence dated later than July 1, 1973, will be considered probative of a miner's disability on July 1, 1973. The regulation as written does not limit the evidence to a specific period of time and our operating guides do make explicit what the group suggests.

Question has been raised with regard to our statement that SSA's jurisdiction in a survivor's claim is limited to cases where the miner died prior to January 1, 1974. While section 435

of the Act mandates a review of all claims, this does not alter SSA's jurisdiction—which is for part B claims only. The regulation has been amended to clarify that SSA does have jurisdiction of claims filed by survivors of miners entitled to part B benefits at the time of death, regardless of when the claim is filed within 6 months of the miner's death or before January 1, 1974, whichever is later. It was also felt by this same writer that § 410.702(f)(3) is not consistent with the BLBRA in that it does not include miners not suffering pneumoconiosis. Since the law requires that to be eligible a miner must be disabled due to pneumoconiosis, we believe § 410.702(f)(3) accurately reflects the law. Suggestions for more detail in the regulations with regard to what constitutes disability due to pneumoconiosis, elaboration of the term pulmonary or respiratory impairment, procedures with regard to good cause for a claimant's failure to file timely, and the manner in which workmen's compensation benefits unrelated to pneumoconiosis are removed have not been adopted since these are all procedural matters to be covered in our operating

instructions which, of course, are available to the public. It was also suggested that § 410.702(i) be expanded to clarify that other evidence of a pulmonary impairment is not required by the interim standards. We believe that the regulation (§ 410.702(i)) is clear enough and shows that the other evidence requirement applies solely to the X-ray rereading prohibition.

We believe that section 435(d)(1)(A) of the act supports our view of evidence on file with regard to § 410.704(e) and we have not, therefore, accommodated the suggestion that evidence on file be expanded to include evidence in the possession of DOL. Following the guidance provided by the House and Senate Conference Committee with regard to simultaneous processing of claims pending or denied before both HEW and DOL we have not removed the restriction, as has been suggested by one writer, against DOL processing of the part C claim while SSA is processing the part B claim.

Section 410.704(b) has been revised slightly to avoid any misconceptions that benefits for a pending part B claim approved on review may be paid only for periods prior to January 1,

1974. Benefits under part B are payable for the life of the claimant. The regulation has also been amended to clarify that survivors and the persons having an interest in the claim may elect review under the BLBRA where the original claimant is deceased, or otherwise incompetent. A number of minor errors have been corrected and references to specific DOL regulation parts added.

The amendments are hereby adopted as revised and set forth below.

(Sec. 411 of the Federal Coal Mine Health and Safety Act of 1969, as amended; 85 Stat. 793, 30 U.S.C. 921.)

(Catalog of Federal Domestic Assistance Program No. 13.802—Special Benefits for Disabled Coal Miners.)

Dated: July 28, 1978.

DOE WORTMAN,
Acting Commissioner
of Social Security.

Approved: July 28, 1978.

JOSEPH A. CALIFANO, Jr.,
Secretary of Health,
Education, and Welfare.

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REFERENCE NO. 4610129

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MEI -

CHARLTON, INC.

2233 S.W. CANYON ROAD
PORTLAND, OREGON 97201
503/228-9663

ENGINEERING AND APPLIED SCIENCES working with MATERIALS ENVIRONMENT INDUSTRIAL PRODUCTS AND PROCESSES

TO: Sandlake Enterprises, Inc.
Attention: Patrick B. McGinnis
20965 Sandlake Road
Cloverdale, OR 97112

CLIENT NO.:

REFERENCE NO.: 4610129
(4608129)

DATE: 3-25-81

SUBJECT: COMPONENT ANALYSIS OF FUEL CELL

REVISED: 4/7/81

	Specification		Sample Identification		
	Method	Material		Fuel Cell	
<i>Analysis</i>		Not Given	Fuel Cell	Fuel Cell in plastic bag	
Coal, percent	Mechanical Separation Gravimetric		46.		
Fiber, "	"		22.		
Oil, "	Soxhlet Extraction		28.***		
Water, "	Open drying at 110°C		3.9	36.2	
Sulfur, "	ASTM** D 129		0.8		
Calcium, "	Atomic Absorption		0.8		
Caloric Value, * BTU/lb	ASTM** D 240		11,200.		
Sulfur loss during combustion, percent	ASTM D 482 + Gravimetric		0.1	← 87½% of Sulfur Retained in ash	
* Gross Value on dry wt. basis					
** American Society for Testing and Materials					

Tested on: 3-24-81, 4-7-81 JM/AH

MEI-Charlton, Inc.

Interference by Coal was negligible, as determined by separate experiment.
(0.34% of coal is extracted as oil)

Ralph A. Hudson

Ralph Hudson, P.E.
Account Director

E: 1/4510

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WILLIAM F. FARR, M. D.
PHYSICIAN AND SURGEON
11737 S. W. 88TH AVE.
TIGARD, ORE. 97223
TELEPHONE 639-6939

Nov 12, 1981

To: Dept of Environmental Quality
Subj: Proposed Ban on Household Use of Coal

Gentlemen: Please stop trying to save us from ourselves. In this day of attempting to free ourselves from dependence on imported energy sources, it seems illogical to ban the use of a relatively inexpensive domestically produced energy source. It also seems illogical to ban the use of coal on the basis of worry about what may happen in the future. Don't regulate just to justify your existence. We don't need more regulations from big or local governments.

Sincerely,

W. F. Farr

November 17, 1981
Oregonians For Clean Air
P. O. Box 182
Oregon City, Oregon 97045

23

Dept. of Environmental Quality
P.O. Box 1760
Portland, Oregon 97204

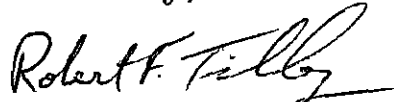
Ladies and Gentlemen:

Oregonians For Clean Air is concerned about any possible degrading of the air quality in Oregon. We understand how much has been done and how much is still needed to meet minimal clean air standards. We also understand the economic pressures which at times short-change the environment in which we must live.

Oregonians For Clean Air agrees with and supports the Department of Environmental Quality proposal to set standards and/or limitations on the use of coal in Oregon. We are aware of the grave problems which have occurred on our east coast and in Europe due to the burning of coal as a fuel. We certainly do not want these problems in Oregon.

If there is anything our organization can do to assist D.E.Q. in the protection of our air quality, please feel free to call on us.

Sincerely,


Robert F. Tilley
Chairman

lt

24

11-13-81

ERIE SCHOBLOM
607 CATHERINE ST
MEDFORD OREGON
97504

PH. 728-8163

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
NOV 17 1981

DEPT. ENV. QUALITY
STATE OF OREGON
Box 17 60
PORTLAND OREGON

AIR QUALITY CONTROL

DEAR SIRSI:

THIS LETTER IS IN REARDS TO THE
PROPOSED REGULATIONS FOR THE DOMESTIC
USE OF COAL FOR HEATING.

I WOULD LIKE TO OFFER THE
FOLLOWING TESTIMONY:

MY WIFE AND I LIVE IN A
RESIDENTIAL NEIGHBORHOOD OF MEDFORD
OREGON, WE LIVE APPROXIMATELY 100'
EAST OF A RESIDENCE THAT BURNS COAL
AS A SOURCE OF HEAT, WE FIND
THE FOLLOWING TO BE TRUE,

1. THE SMOKE FROM A COAL FIRE IS
HEAVY (COOL) AND SINKS TO THE GROUND
(Westerly winds carry the smoke DIRECTLY
TO OUR PROPERTY)
2. THE SMOKE HAS AN OBNOXIOUS ODOR,
3. THE SMOKE IS IRRITATING TO THE
RESPIRATORY SYSTEM,
4. THE SMOKE IS DIRTY, IT COATS OUR
WEST WINDOWS WITH A BLACK FILM,

(over)

5. WE FIND IT UNLIKELY TO TRY
AND BE OUTSIDE AROUND OUR HOUSE
WHEN OUR NEIGHBORS ARE BURNING
COAL, BECAUSE OF THE IRRITATING
SMELL.

6. I FIND NONE OF THE ABOVE
PROBLEMS TO BE ASSOCIATED WITH
THE BURNING OF SEASONED WOOD.

IN CONCLUSION, I STRONGLY
OBJECT TO THE BURNING OF COAL
IN WINDFORD FOR THE ABOVE REASONS
AND I AM IN FAVOR OF RESTRICTING
THE USE OF COAL.

SINCERELY

Samuel M. Colby

Department of Environmental Quality

Air Quality Division

PO Box 1760

Portland OR 97207

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
NOV 18 1961

AIR QUALITY CONTROL

Written statement concerning proposed coal burning rules:

I am writing to support the D.E.Q.'s proposed rules to ban the sale and use of high sulfur coal in parts of Oregon. Because of its ready availability, low cost and good burning qualities, coal is a very attractive fuel for home heating and I am sure that its use will increase if something is not done.

The time to place limits on residential coal burning is now. If ~~you~~ wait too long, people will have money invested in equipment and will not want to stop. The proposed 0.3% sulfur content limit seems reasonable. While it would effectively ban the use of currently available coal, the standard is not impossible to meet (some English coal meets this standard).

The burning of coal, high sulfur coal in particular, presents a significant health hazard. It produces sulfur dioxide, particulates and other pollutants which can cause cancer as well as respiratory problems.

I commend the DEQ's foresight in this matter.

Sincerely,

Robert C. Smith
5856 NE 27th Ave.
Portland OR 97211

LEAGUE OF WOMEN VOTERS OF OREGON
317 Court St. N.E. - 202
Salem, Oregon 97301
503-581-5722

TESTIMONY OF PROPOSED RULES TO LIMIT THE SULFUR AND VOLATILE
MATTER OF FUEL COAL FOR DIRECT SPACE HEATING

BY

LEAGUE OF WOMEN VOTERS OF OREGON

November 18, 1981

The League of Women Voters of Oregon supports the Department of Environmental Quality proposal to limit the sulfur and volatile content of coal used for residential space heating. We are impressed by the conclusions of the Coal Health Effects Review Committee that increased residential coal burning would hinder efforts to attain existing health standards, cause acute lung symptoms for some citizens, and cause an unacceptable increase in potentially carcinogenic polycyclic organic matter.

It is important to take this action now because coal will be readily available within a few years when export facilities are built.

We consider the sulphur content limitation to be a reasonable way to regulate the use of coal without closing its use as an alternate heat source altogether.

Mary Ann Rombach

Mary Ann Rombach
Natural Resources Chairman
Rt. 3, Box 3216
Rainier, Or. 97048 556-3801

Norma Jean Germond, President
League of Women Voters of Oregon
224 Iron Mountain Blvd.
Lake Oswego, Or. 97034 636-4251

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 20 1981

AIR QUALITY CONTROL



OFFICE OF THE MAYOR

CITY OF MEDFORD
MEDFORD, OREGON 97501

MEDFORD'S SISTER CITY:
ALBA, ITALY

November 12, 1981

Environmental Quality Commission
Box 1760
Portland, OR 97207

Dear Commissioners:

Subject: Public hearing November 17, 1981, considering amendments to limit sulfur and volatile content of coal used for residential space heating

The City of Medford is located in a relatively narrow valley, subject to frequent air inversion problems which cause particulates suspended in the air to collect in large quantities and hang over the valley for the duration of the air inversion.

Some time ago coal appeared in this valley for sale in small bags for use in residential heating. The Medford City Council was concerned that this introduction of coal as heating fuel would make a bad air pollution problem get worse. As a result, an ordinance was passed that bans the sale of coal in the city.

It was realized at the time that a better approach would be to set a limit on the sulfur and volatile content of coal, but the establishment of such standards is beyond the effective ability of local government.

Therefore, the Medford City Council on November 5, 1981, unanimously voted to notify you of our support for the proposal to develop a "clean coal regulation" based on 0.3% sulfur and 5% volatile content. We believe that the proposed regulation would be an effective means of controlling potential pollution from the use of coal throughout our airshed. It is respectfully requested that this letter be entered in the record at the public hearing on November 17, 1981.

Very truly yours,

Al Densmore
Mayor

LH:cd

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 17 1981

AIR QUALITY CONTROL

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 16 1981

OFFICE OF THE DIRECTOR



November 17, 1981

JFR
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WRITTEN STATEMENT CONCERNING PROPOSED COAL BURNING RULES
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 17 1981

I am representing over 2000 members of the Sierra Club in the Portland area and would like to comment on the Department of Environmental Quality's proposed rules to ban the use and sale of high sulfur coal in problem airsheds.

This proposal shows excellent foresight on the part of the DEQ concerning a problem that would have disastrous effects on our air quality. Banning "dirty" coal now before individuals and businesses have invested large sums of money into coal and conversion to coal stoves is extremely important.

There is little doubt that use of coal for direct space heating will greatly increase in the future if something is not done now. This is because coal is relatively inexpensive, will be readily available (with the new coal export terminals), and burns longer than wood. Coal burning would be especially harmful in the Portland, Salem, Medford and Eugene airsheds which are trying hard to achieve attainment of air quality standards. Additional pollution from coal burning would also limit the amount of new industry that would be allowed to come into these areas.

From a health standpoint, these problem areas cannot tolerate the increases in sulphur dioxide, sulfates, particulates, and polycyclic organic material (which are known carcinogens).

Also of concern to us are the other problems created by coal burning, including smoke, an unpleasant odor, visibility impairment, and soiling of buildings, statues, etc.

We, therefore, agree with the recommendations of the Portland Air Quality Advisory Committee and the Coal Health Effects Review Committee to ban the use of coal that contains greater than 0.3 % sulfur and a high amount of volatile matter (greater than 5%). Since technology exists to make a "cleaner" coal, we see no reason to ban coal entirely.

The Sierra Club would also like to commend the DEQ for their timely plan to prevent a major air quality problem,

Thank you for giving us this opportunity to comment.

Ann C. Kloka
Ann Kloka
Air Quality
Columbia Group Sierra Club

SIERRA CLUB

2637 S.W. Water Street • Portland, Oregon 97201 • (503) 222-1963



League of Women Voters of Salem

1145 Duffield Heights SE

SALEM, OREGON 97302

RE: Amendments to Sulfur Content of Fuel, Coal, Proposed Rule to Limit the Sulfur & Volatile Matter of Coal Sold for Direct Space Heating

The League of Women Voters of Salem supports the proposal to limit the sulfur and volatile content of coal for residential use. The League of Women Voters of Oregon has testified in support of this proposal and we wish to supplement that testimony by adding our local perspective on the impact of coal use in our community.

Salem already experiences annual intrusions of smoke and visibility loss from field burning, as well as continuing high levels of carbon monoxide and hydrocarbons, primarily from mobile sources. The addition of sulfur dioxide, sulfates and carcinogens from coal burning to the air could have serious consequences not only to our health but also to our economy.

Salem has developed a plan for economic growth titled Project 90 which includes an aggressive attempt to get electronics-related industries to locate here. One of the major selling points for Salem is the quality of life in this area. Smoke and soiling from coal would detract from that quality and could hinder highly-sensitive silicon-wafer production, thereby eliminating from consideration that industry which we most want to locate here.

The proposed rule change should be implemented as soon as possible with a special provision for current coal users. There are nearly two heating seasons between now and July 1983 during which time the numbers of homes using coal will increase. More people will have converted to coal and will be economically penalized by the rule change.

We also urge the Department of Environmental Quality to make the contents of the Coal Health Effects report known to wood stove dealers and to the public. Coal is a newcomer to Oregon as a fuel source and many people know very little about it, especially in residential use. When coupled with environmental and health costs, coal can be costly indeed.

Submitted by:

Ann Glaze

Ann Glaze
Natural Resources Chair

Sally Carson
President

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 17 1981

AIR QUALITY CONTROL

237 SE 17 Ave.
Portland, OR 97214
November 17, 1981

Department of Environmental Quality
Air Quality Division
Box 1760
Portland, OR 97207

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
NOV 18 1981

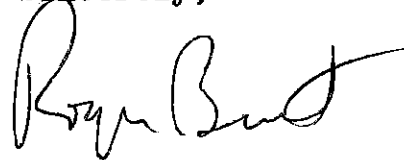
Dear Air Quality Division:

AIR QUALITY CONTROL

We are opposed to the burning of coal in the Portland area. Burning coal is a source of both fluoride and heavy metal emissions. We realize the need for individuals to economize, but this can not be done at the expense of the airshed and the resultant increase in risk of health problems to others. We urge the adoption of restrictions on the burning of coal.

Thank you.

Sincerely,



Roger Burt, B.S., M.S.

Co-Chairman, Citizens for Pure Water

Director, Citizens for a Lead-free Environment

J.
61
Po

31

615 NE Lawrence
Portland, OR 97232
November 19, 1981



Depart. of Environ. Quality

Air Quality Division

P.O. Box 1760

Portland, OR 97207

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 23 1981

AIR QUALITY CONTROL

To Whom it may Concerns:

I support development of air quality standards that limit residential coal burning in major metropolitan areas.

I am a public health nurse and a life long Oregon resident born & raised. I have traveled many places in the world and have experienced the effects of pollution & seen the effects on peoples quality of life. I hope we will continue to maintain our present quality of life in the state and even improve it.

Sincerely,

Judith Rose



OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

32

STATE CLEARINGHOUSE

Intergovernmental Relations Division
155 Cottage ST NE Salem, Oregon 97310
Phone: 378-3732

Handwritten notes:
11/12/81
11/13/81

Project # OR 811021-028-6 Return Date: NOV 13 1981

To Agency Addressed: The attached State Plan/Amendment has been submitted in conjunction with a request for the Governor's approval. It is provided for your information and to solicit comments for the advice and counsel of the Governor. Your comments, if any, must be received by the above date in order to receive consideration.

COMMENTS

The Office of Environmental Health of the Health Division has reviewed the supporting documentation of the adoption of proposed rules limiting the sulfur and volatile organic content of coal for residential use. The deleterious health effects of exposure to airborne chemicals resulting from the burning of coal are well known. We believe the Department has moved responsibly to address this issue before acute symptoms arise. The method chosen for controlling the use of solid fuel in residential applications appears to leave open the future use of coal or coal-like substitutes that can be shown to have less severe public health consequences. Rather than a more rigid outright ban, the proposed rule encourages research into more acceptable alternatives. The Health Division supports the Department's move to adopt these rules. However, we would not be averse to adoption of rules which permitted present, long-time users of coal to continue their current level of use, provided that DEQ can monitor this.

Agency Health By Steve Boedigheimer

EQC
AQ
33

LANE REGIONAL



(503) 686-7618
1244 Walnut Street, Eugene, Oregon 97403

AIR POLLUTION AUTHORITY

Donald R. Arkell, Director

November 13, 1981

Joe Richards, Chairman
Environmental Quality Commission
P. O. Box 1760
Portland, OR 97207

Re: DEQ Proposed Regulation
of Coal for Home Heating

Dear Mr. Richards;

The Board of Directors of the Lane Regional Air Pollution Authority wishes to express its support of the proposed regulation which establishes limits on coal used for residential space heating inside AQMA's.

A survey conducted in Lane County indicates a current low use of coal for residential space heating in the Eugene/Springfield AQMA, and we believe that the proposed action is appropriate as a means to avoid future additional air quality problems in those areas where such problems have been identified.

The decision to support the proposed regulation was made at the Board's regular meeting of November 10, 1981.

Sincerely,

Bill Hamel
Bill Hamel, Chairman
Board of Directors

DRA/mjd

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 23 1981

AIR QUALITY CONTROL

1581 NW Tamasbrook Ct
Beaverton, Ore 97006
11/17/81

Dept Envir. Quality
522 SW 5th Ave
Portland, Ore

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
NOV 24 1981

AIR QUALITY CONTROL

Dear Sirs:

The purpose of this letter is to express my concern that home wood & coal fires are seriously degrading air quality in the T.V. Valley. Often in the winter, the air lies stagnant in the valley allowing smoke build-up. As a runner, in these circumstances the pollution is very noticeable to the lungs. I urge you to limit wood/coal fires in your upcoming rulings.

Sincerely,
Robert N. Astor

November 23, 1981

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

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
R E C E I V E D
NOV 25 1981
AIR QUALITY CONTROL

Dear Sir:

Your proposal to ban the use of coal is just one more example of a bunch of empire building bureaucrats who don't know when to stop.

The legislature passes a law which initially sounds innocent enough. By the time you guys get done with it you will make criminals out of every householder who wants to warm his feet by fire. Never mind that down the street someone is getting away with murder. That's not a figure of speech, that is the actuality.

This thing that you propose will make the Volstead Act look like landmark legislation - chimney smoke will take the place of bathtub gin.

I have no intention whatsoever of abiding by any such regulations. If anyone comes around to put monitoring equipment on the smoke hole of my teepee I intend to drive him off the place with a shotgun. If you put the local dealers out of business I'll buy it in McMinnville or Vancouver or from bootleggers who will sell it.

I burn a combination of wood and coal. I find that both the wood and the coal burn more efficiently. The coal with less smoke, the wood with less creosote. A ton of coal lasts me two or three years.

I have been breathing this air for seven decades and I haven't noticed a bit of difference since you people came onto the scene. Any normal person has to conclude that your stories of all those tons of "particulate matter" floating around out there is just a bunch of bullshit. You don't really know any more about it than I do.

According to you guys we are still breathing the smoke from Sitting Bulls campfires. The curbs were once lined with piles of slabwood, and all over town people heated their homes with sawdust burners and nobody gave it a thought. Get off our backs.

Sincerely

E. F. Sukut
8444 S. W. 61st Ave.
Portland, Oregon 97219

E. F. Sukut

To Whom it may Concern.

I am writing in regards to the burning of coal. I bought my home 37 years ago from the city with a coal furnace in the house. I have good heat and would not change to gas, oil, or electric. I am a widow with a limited income and could not afford a change if it comes to that also I believe your fire places put out more smoke which I have observed than any coal furnace.

I don't believe Portland has so many homes which burn coal any more. who would pay for all these changes and why can't you leave us coal burners alone you make me sick.

Margy Russell

2130 S.E. Hemlock

Portland, Ore

97214



NICKERSON FLEET MANAGEMENT CORP.

6625 N.E. 82ND AVENUE • PORTLAND, OREGON 97220 • (503) 255-6235

November 23 1981
State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
NOV 25 1981

AIR QUALITY CONTROL

Department of Environmental Quality
Post Office Box 97207
Portland, Oregon, 97207

Gentlemen,

The effective banning of coal for space heating does our community a severe disservice.

Coal as an adjunct fuel is a valuable tool and as such presents no source of breathing danger.

If coal were a substantial threat to health, all people living in Chicago or East and born before 1950, would be dead. I have not checked specifically, but there must be people still alive back there that are over 31 years old.

Sincerely,

Lewis C. Nickerson
President

LCN:lpp

NERCO INC.
111 S.W. COLUMBIA, SUITE 800
PORTLAND, OREGON 97201
TELECOPIER 503-241-2819
TELEPHONE 503-241-6600

WILLIAM W. LYONS, VICE PRESIDENT RESOURCE
DEVELOPMENT/REGULATORY AFFAIRS

November 18, 1981

Oregon Department of
Environmental Quality
Air Quality Division
522 S.W. 5th Avenue
Box 1760
Portland, Oregon 97207



State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
NOV 20 1981
AIR QUALITY CONTROL

SUBJECT: Proposed Rules to Limit the Sulfur and Volatile
Matter of Fuel Coal for Direct Space Heating

Dear Sirs:

NERCO Inc. welcomes this opportunity to comment on the proposed Department of Environmental Quality rules limiting the sulfur and volatile matter of fuel coal for direct space heating in the airsheds of Portland, Salem, Eugene and Medford. NERCO Inc. is the coal and mineral development subsidiary of Pacific Power Light Company, a utility serving six western states.

NERCO understands the advisory committee's concerns over air quality issues in the subject airsheds but submits that the perceived problem should be addressed with a more reasonable regulation.

Rules and regulations to help further the goal of improved air quality must be analyzed in terms of bestowing a net benefit upon the people they serve. The effect of the proposed rule is to bar the use of coal as a home heating fuel. This is despite the fact that coal usage now makes up only a minimal part of the state's air emissions. The Department also admits that no coal is currently available in the U.S. which meets the emission levels set by the proposed rule of .3 percent sulfur and 5 percent volatiles. For coal producers, it is not economically feasible to produce coal in compliance with these levels for residential burning.

The obvious effect is a total ban, after July, 1983, on use of coal as a home heating fuel. Given the present low levels of coal use in the state for such purposes and the improbability that demand will increase absent the proposed rule, a more equitable approach would avoid elimination of one energy source from the marketplace. Complete foreclosure of a heating option does not appear appropriate, especially in light of the Northwest's overall utility picture.

Oregon Department of
Environmental Quality
November 18, 1981
Page Two

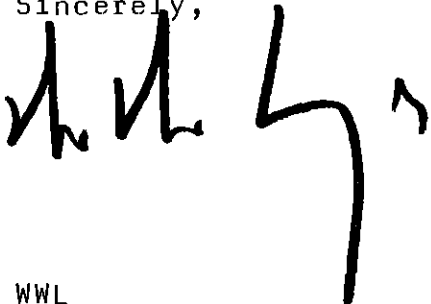
For consumers, the proposed rule means existing residential coal users must switch to an alternative, probably more costly fuel, by July 1983. Conversion of one's home heating system requires extensive planning and advanced family budgeting. This presents a substantial economic burden at a time when our Nation's economy is in a recession and Oregon's unemployment is at a record high. This seems unreasonable and not in the best interests of the people living in the state.

A more sound approach would be a rule which is both responsive to market place economics and flexible enough to ensure that as cleaner coal becomes available consumers will shift to its use.

The existing levels of pollution in these specified airsheds are caused by a combination of emissions from various sources, of which residential coal burning is a proportionately small amount. While an approach aimed at prevention is understandable, the rule at issue would do little to improve air quality in the affected airsheds and would allocate to coal an unreasonable portion of the regulatory constraints necessary to maintain clean air. NERCO would advocate a more restrained and equitable approach, based on quantifiable home coal demand figures. Certainly, a regulatory action that serves to eliminate an abundant fuel as an energy option deserves the closest attention of the Commission.

We thank you for the opportunity to comment and remain hopeful that these comments are of use in understanding the full range of issues surrounding this decision.

Sincerely,

A handwritten signature in black ink, appearing to read "W. W. Lyman". The signature is stylized and somewhat cursive, with a large "L" and "Y" being particularly prominent.

WWL
sjm



Department of Energy
Washington, D.C. 20545

November 16, 1981
State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Air Quality Division
Department of Environmental Quality
State of Oregon
Post Office Box 1760
Portland, Oregon 97207

RECEIVED
NOV 20 1981

AIR QUALITY CONTROL

SUBJECT: PROPOSED RULES TO LIMIT THE SULFUR AND VOLATILE
MATTER OF FUEL COAL FOR DIRECT SPACE HEATING,
Proposed amendment to OAR 340-22-020;
Notice of Public Hearing.

Dear Sir/Madam:

This letter constitutes my comments regarding the Subject Proposed Rules; please note, however, that these remarks do not necessarily reflect the views or official policy of the U.S. Department of Energy (DOE).

The Division of Coal Utilization Resource Development serves as DOE's focal point for residential coal use; we also monitor the vitality of the anthracite (hard coal) industry, and lend our assistance toward stimulating demand and commensurately increasing supply.

Accordingly, I am quite concerned that these proposed rules, which would prohibit the residential use of "coal containing greater than 0.3 percent sulfur and 5 percent volatile matter" ... "for direct space heating within the Portland, Salem, Eugene-Springfield, and Medford-Ashland Air Quality Maintenance Areas," may be contrary to the public welfare by preventing consumer substitution of all forms of coal, including anthracite, for more costly fuel oil. I am also concerned that the Proposed Rules, which are "considered a preventive measure necessary to avoid interference with attainment of air quality standards and to avoid potential adverse health effects and nuisance conditions," may actually be directly antithetical to these very objectives by encouraging enhanced homeowner usage of fuel wood in lieu of coal with resultant even more grievous air quality impacts.

The use of coal as a fuel for home heating, particularly anthracite which is the preferred coal form because of its high heat value, environmental benefits, and convenience, had declined in popularity over the last few decades. However, since the drastic increases in price of home heating fuel oil, concerns regarding fuel oil shortages and future price rises, and recent increases in the cost of fuel wood, there has been a renaissance in interest in the residential use of coal. This phenomenon reached its crest during the winter of 1980-81,

with the result that major increases in sales of residential coal-burning appliances were met with a serious shortage of anthracite, particularly "chestnut" and "stove" sizes, in the Northeastern United States.

The August, 1980, issue of Coal Age magazine, in an article entitled "Coal Heats Homes as Oil Prices Rise" (copy enclosed), noted that:

The anthracite industry is especially suited ... to take advantage of the developing fuel situation in the Northeast. The proximity of the Pennsylvania anthracite fields to New England makes the fuel easily obtainable by truck and rail. Anthracite has a high Btu rating and when burned properly, allows for even heating and almost smokeless combustion. It meets EPA standards and most local requirements for emissions and is highly recommended for home use by stove and furnace manufacturers.

Government and some industry officials say that the home heating market could increase anthracite sales by 10% during the next heating season. This trend toward residential use of coal, which started to gain attention only during the past nine months, is so recent that few government or industry statistics are available. But, coal producers and dealers as well as stove and furnace manufacturers concur that the consumer is no longer just interested, he has started to buy.

Additional information on the renewed interest in coal as a residential fuel, and on anthracite's desirability for this purpose, is contained in the following documents; copies are enclosed for your information and review:

- o "Burning Coal," Northeast Regional Agricultural Engineering Service,
- o "Anthracite Coal Shortages," Record of Hearing, Subcommittee on Energy and Mineral Resources, United States Senate, March 24, 1981.
- o "ANTHRACITE COAL IN CRISIS: Can We Heat New England Homes This Winter?", House Republican Research Committee, June 17, 1981, and
- o "Anthracite Coal Supply for the 1981-82 Winter," U.S. General Accounting Office Investigation EMD-81-141, September 18, 1981.

To my knowledge, the most comprehensive studies of environmental impacts from home heating with coal and wood are the following reports which were prepared by the Monsanto Research Corporation for the U.S. Environmental Protection Agency (EPA):

1. "Source Assessment: Residential Combustion of Coal," EPA-600/2-79-019a, January 1979, and
2. "Source Assessment: Residential Combustion of Wood," EPA-600/2-80-042b, March 1980.

These reports compare atmospheric emissions from anthracite with emissions from bituminous coal (Ref. 1) and provide data on fuel wood emissions (Ref. 2); it is instructive to review their Source Severity tabulations, extracted below:

SOURCE SEVERITIES FOR EMISSIONS FROM AVERAGE, AUTOMATIC, COAL-FIRED RESIDENTIAL COMBUSTION UNITS

<u>Emission Species</u>	<u>Source Severity</u>	
	<u>Bituminous coal</u>	<u>Anthracite</u>
Particulates:	0.003	0.0007
Oxides of sulfur:	0.02	0.004
Oxides of nitrogen:	0.009	0.002
Hydrocarbons:	0.002	0.002
Carbon monoxide:	0.00007	0.00005
Polycyclic organic materials (POM):	2.6	0.05
Polychlorinated biphenyls:	less than 0.00000045	
Formaldehyde:	0.00002	

- NOTES:
- i. Blanks indicate data not available.
 - ii. Emissions are assumed constant over a 24-hour period during the heating season.
 - iii. "Source Severity" is said to measure the potential health effect of an emission species at its maximum ground level concentration. According to EPA, generally 0.05 is considered a threshold level, above which a potential environmental problem may exist.

It is clearly apparent that anthracite is superior to bituminous coal with regard to air quality impacts from residential space heating.

The following table provides similar data for fuel wood (Ref. 2):

SOURCE SEVERITY FOR AVERAGE WOOD-FIRED RESIDENTIAL COMBUSTION UNITS

<u>Emission Species</u>	<u>Source Severity</u>	
	<u>Wood stove</u>	<u>Fireplace</u>
Total particulates:	0.02	0.08
Filterable particulates:	0.008	0.02
Oxides of sulfur:	0.0003	
Oxides of nitrogen:	0.004	0.05
Hydrocarbons:	0.063	1.1
Carbon monoxide:	0.004	0.005
Polycyclic organic materials (POM):	46.	14.
Formaldehyde:	0.013	0.23
Acetaldehyde:	0.0001	0.002
Phenols:		0.03

NOTES: Same as for table above.

A comparison between this table and the coal data readily indicates that not only is anthracite superior to bituminous coal in terms of adverse environmental impacts, anthracite is also preferable to fuel wood for all emission species except oxides of sulfur. However, the lower source severity in this latter instance is probably more than offset by the extremely high fuel wood source severity for POM because of their potential carcinogenicity. Ref. 2 notes that:

Total (nationwide) POM emissions from residential wood combustion are ... 3800 metric tons. ... Annual POM emissions from residential coal combustion have been estimated at 100 metric tons. ... residential wood combustion accounts for 80% of national POM emissions from stationary sources.

As a final note, I would like to quote the final paragraph of the text in Ref. 1, with particular emphasis on the last phrase:

Although national trends remain difficult to predict, it is obvious that coal heating is increasing in certain parts of the country. The future of coal heating will depend on equipment and fuel availability, comparative costs of other fuels, and the impact of governmental emission regulations.

Recommendation:

In conclusion, I recommend that the Subject Proposed Rules be withdrawn; instead, in order to ensure that air quality considerations are appropriately addressed, I recommend that the Department of Environmental Quality propose rules similar to those in effect in New Jersey; such regulations would permit the use of anthracite (hard coal) containing not more than 0.8 percent sulfur by weight for residential space heating.

For your information and reference, I am enclosing a copy of the "Sulfur in Solid Fuels" regulation promulgated by the State of New Jersey on May 14, 1981. Note in particular page 6 of the "Report of Public Hearing and Basis for Promulgation," which notes that:

... the Department has deleted the anthracite exemption from the final rule, to clarify that anthracite coal with less than 0.8 percent sulfur can be used in both old and new homes.

... by encouraging the use of anthracite rather than other coals, the environmental impact of the current trend to augment home heating systems through solid fuel combustion will be minimized.

I trust that these comments are responsive to your needs. Please do not hesitate to contact me if we may assist you further with regard to the above, or if we may provide additional information on our activities in general (301-353-5934).

Very truly yours,
FOSSIL ENERGY

A handwritten signature in cursive script, appearing to read "Jerry Pell".

Jerry Pell, Ph.D., CCM
Division of Coal Utilization
Resource Development
Office of Coal Utilization
and Extraction

Enclosures (6)



United States Department of the Interior

BUREAU OF MINES

WESTERN FIELD OPERATIONS CENTER
360 EAST 3RD AVENUE
SPOKANE, WASHINGTON 99202

October 26, 1981

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
OCT 28 1981

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

AIR QUALITY CONTROL

Re: Proposed Rules to Limit Sulfur and Volatile
Matter of Fuel Coal for Direct Space Heating

Dear Sir:

The proposed rules appear to be nothing but an attempt to prevent the mining and burning of Northwest coal for space heating. We doubt that any Northwest bituminous coals -- or even coals from as far away as Utah -- can meet the proposed specifications; they are unrealistic. Only unusual low volatile, low sulfur anthracite coal imported from far outside this region could be burned. Possibly some coke could meet the specifications, but even most coke contains in excess of 0.3 percent sulfur.

Sincerely,

R. N. Appling, Jr., Chief

Lois Copperman
2806 N.W. Fairfax Terrace • Portland, Ore. 97210

November 18, 1981

Home Coal Burning Rule
Department of Environmental Quality
Salem, Oregon

RECEIVED
NOV 25 1981

PUBLIC AFFAIRS

Dear Sirs:

I read with interest that you are considering banning the use of coal which contains more than 13% sulphur or 5% volatile organic compounds for home fuel burning. I strongly support the proposal. During the past few years my neighbors on two sides have utilized wood stoves. Although I haven't mentioned it, the air outside my home is now frequently stinky and undesirable. When coal is burned in one house, it is particularly obnoxious. I like your approach - which would encourage the production of cleaner coal - but suggest you also add "or the use of stoves which control emissions to ... standards."

Yours truly,
Lois Copperman

POWELL
20607 COVENTRY CIR
BEND, OREGON 97702
NOV. 17, 1981

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
NOV 17 1981

Bob Danko
DEPT. ENVIRONMENTAL QUALITY
STATE OFFICE BUILDING
BEND, OREGON, 97701

BEND DISTRICT OFFICE

DEAR Bob,

I reviewed the proposal and medical report and presented it to our local league of Women Voters. While it takes several weeks to clear letters through our Board and the State Board - I cannot now speak for the League.

But because of the deadline I would like to personally commend your department for its foresight. This is an excellent idea and I hope it will be adopted.

Most concern in the areas with poor air quality is for the additional particulates - but we are also concerned that the SO₂ might become acid rain in the Cascades, where the soils could not buffer, leading to loss of fish and wildlife -

Both my husband and I support this proposal and we will inform others of it -

Thank you for the information.

Sincerely yours,
Becky and Jim Powell

KENNETH E. JERNSTEDT
1201 SOUTHWEST TWELFTH AVENUE
PORTLAND, OREGON 97205



NOV 25 1981

November 24, 1981

Ms. Linda Zucker
Department of Environmental Quality
Air Quality Division
Box 1760
Portland, OR 97207

Dear Ms. Zucker:

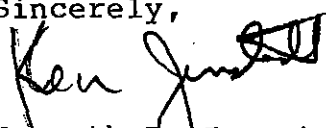
Re: Proposed Rules Regarding
Fuel Coal

I noted recent news coverage of the DEQ's consideration of a rule regarding the burning of fuel coal in home heating devices. Based on the personal experience of our neighborhood, I want to strongly endorse the DEQ's efforts.

One of our neighbors has made a practice of burning coal in her fireplace. Although I am sure she does not mean ill harm, her practice has produced fumes that none of us enjoy.

Not incidentally, I am concerned about the long-range health effects that her practice, especially if it spreads to others, may have on my children.

We urge that the proposed committee and staff report be followed.

Sincerely,

Kenneth E. Jernstedt

KEJ:jk

Robert M. Greening, Jr.
655 S.E. St. Andrews Drive
Portland, Oregon 97202

November 25, 1981

Ms. Linda Zucker
Department of Environmental Quality
Air Quality Division
Box 1760
Portland, Oregon 97207

RE: Proposed Rules to Limit the Sulphur and Volatile Matter
of Fuel Coal for Direct Space Heating

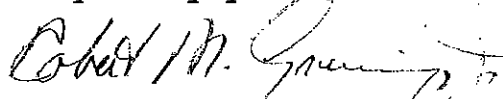
Dear Ms. Zucker:

This letter is a comment for the record for DEQ's Rulemaking on this proposal. I strongly, and without reservation, support DEQ's proposal. I have read both the Committee and Staff Reports and agree with the findings and recommendations.

My support, however, is based as much on my personal experience as on any scientific evidence. My neighbor burns coal in her fireplace. That practice makes our neighborhood smelly, sooty and noxious. I am particularly concerned about the short and long term health effects on my 18 month old daughter. Your proposal would save our neighborhood from this health hazard.

In conclusion, I and my family urge you to adopt the rule, which does not prevent space heating with coal, but lessens the health danger.

Very truly yours,



Robert M. Greening, Jr.

Hearing Section

NOV 27 1981

11/10/84
46

DEQ,

I live outside the
Portland Area, Estacada
and IF you stop the
Sale in Portland I cannot
get any more

Estacada OR 300 Rick Lorfer
N.W. Wade

DEQ -

47

We burn coal and want to continue to do so - It causes no more pollution than wood and certainly ^{is} ~~is~~ lot less than the green wood people use. Teach people to use stuff right and stop using their cars for everything

Marian Reifer
P.O. Box 242
Estlin, OR

Why Young 48
Jay Gillaspie
Weatherbee

October 27, 1981

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
NOV 3 1981

Mr. William H. Young, Director
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97204

OFFICE OF THE DIRECTOR

RE: DEQ letter dated September 28, 1981
People Interested in Residential Coal

Dear Mr. Young:

In reference to the above captioned letter, I wish to have the following comments read into the record of each proposed public hearing and taken under advisement by the appropriate departments or divisions of the State DEQ. If the procedure would be appropriate a copy forwarded to the EQC. The aforementioned letter and attachment (EQC, Agenda Item F, October 9, 1981 EQC Meeting) present many items that must be addressed individually.

The proposed .3% sulphur content limitation is essentially restricting all coal sales for residential use. I have not been able to locate any coal west of the Mississippi River with a sulphur content of less than .45 to .5%. While this .3% restriction would allow coal sales there is no coal to sell with that low a sulphur content. The proposed standard is very far below EPA limits. The proposed rule reduces the sulphur content by too great a degree to allow the citizens of the State a choice in residential heating fuels by essentially banning coal sales.

The residents of the Pacific Northwest and specifically the State of Oregon are going to face some difficult decisions in the next decade. They will have to choose between working, electric lights or pristine air. I refer specifically to the attached Ex-

hibit "A", a transcript of The Electric Energy Test, aired nationally on television on September 12, 1979. In the transcript George Guinett of Bonneville Power Administration anticipates Oregon population to increase to 2.9 million by 1990 and 3.3 million by the year 2000. Ed Schafer of Portland State University disagrees, he thinks the growth will be greater. The report estimates more than 10 Bonneville Dams will be needed by 1990 to meet our electrical requirements. The point is, 75% of residential electric use is for space heating. Every KWH we can save is going to help over the next 10-20 years. Therefore, an increased use of low sulphur coal (1.0%) or less can save many kilowatt hours.

The Financial Impact Statement of the Coal Health Effects Review Committee stating a \$400,000 annual loss to coal dealers makes two points. Senator Mike McCormick, State of Washington stated "Our electrical energy production in the Northwest is in serious trouble due to schedule delays in new plant construction. Each plant experiencing a one year delay is costing us 100 to 150 million dollars per year..... all of us paying electric bills are going to have to pay much more because of these delays." As I'm sure you are aware, 12 pounds of 12000 BTU coal equals 41 KWH of electricity.

(Exhibits C, D, E, F.)

I feel the CHE Review Committee has not adequately considered the financial ramifications of their proposed rule. They are concerned with health effects only and are not considering the total picture in what they are proposing. They seem to be very concerned about air quality and health considerations, but I'm sure they all drove their automobiles to the CHE meeting thereby polluting the air for someone else.

Another item the CHE may not have considered is in Exhibit "B", Popular Science, January 1980. The chart on Page 3 depicts coal with .5% sulphur or less. Note the BTU/lb. Low sulphur coals also have the lowest BTU/lb. rating. Therefore to obtain an equal number of BTU's to heat your home you would have to burn more coal. By doing so, the sulphur and SO₂ discharges would be of lower percentage but higher in actual

volume. This seems to be a self defeating proposal from CHE. The hypothesis is correct but the conclusion is opposite the intent of the proposed rule.

In response to your comments under Health Effects, Item A., you should really do your research on 1952 London Killer Fog. Prior to 1963 the word London was used to denote the suburban area of the City of London, the surrounding administrative county of London, the suburban extensions into the adjacent counties of Middlesex, Essex, Hertfordshire, Surrey and Kent for a total of approximately 735 square miles. The approximate population of this area was 9 million persons in 1952. London is also in a basin. The configuration of the basin is conducive to frequent development of radiation fog in winter. Coal and iron ore mines abound in England but they do not have an abundance of fresh water. Therefore the generation of electricity was primarily from coal fired generating plants. London was also a highly industrialized area with aircraft plants, clothing plants, paper mills (using a great deal of sulphur) milling mills, refining, tanneries, fertilizer plants and railway manufacturing plants. All this industry required huge amounts of coal generated electricity along with the electrical demands of a 9 million population. The coal mined in England, is high sulphur, low quality, low priced coal but adequate for generating plants. In addition to this many people heated their homes and apartments with high sulphur coal. Without addressing the chemical reasons why coal burning contributed to the smog problem one can readily see London had a problem. The issue here is one of MAGNITUDE. How can you ever compare a 9 million population in 745 square miles to a 2.9 million population in approximately 98,000 square miles? I do agree that some of the airsheds have a different population vs. area than the overall state figure but nothing even close to 10% of London's problem. The probability of such an event in any of the Oregon AQMA's is extremely remote. Lets compare apples to apples, not a model ship to the aircraft carrier Enterprise.

Another item improperly addressed was the TSP issue. I refer specifically to Exhibit H, Environmental Readiness Document, Wood Combustion, U.S. Dept. of Energy. "Direct

combustion of wood emits greater amounts of particulate and unburned hydrocarbons, but lesser amounts of SO₂, than coal combustion per unit of energy". By using coal instead of wood the TSP problem could be reduced. Re: Your letter, Air Quality Impacts, B. 2. See Exhibit I, Medford Mail Tribune, May 6, 1980. The interview with Dr. John Cooper, Oregon DEQ, "Coal which has been described as being particularly dirty, is still a potentially cleaner fuel than wood". In addition I refer you to Exhibits J (Attorney Democratic Herald) and K (Portland Journal of Commerce) relating to the clean burning of coal.

Enclosed is an article addressing the point of "Acid rain", Exhibit L and M, The Wall Street Journal, September 19, 1980 and WSJ June 30, 1980. The conclusion presented by renowned scientists is that acid rain existed prior to the industrial revolution and in a period of no volcanic activity. They are undecided regarding the cause of acid rain, but they do not point the finger of guilt at either industrial or residential coal use.

In analyzing the chemical products of burning wood bark, one can see that it also contains sulphur and emits SO₂. As yet I have not seen statistics relating to the amount of sulphur and SO₂ added to our airsheds from these sources. The DEQ staff seems to have overlooked this source of pollution, and will probably therefore assume any S and SO₂ found in an air sample will be due to coal.

Referring again to Exhibit "H", the DOE Environmental Readiness Document, Page 15, "Based on limited data, carbon monoxide is produced at a rate of about 120 pounds per ton of wood and particulate matter at 20 pounds per ton of wood".

If you are looking for something to regulate the prime culprit appears to be wood, not coal. Hopefully you will keep your mind open and not loose sight of the total picture of the electrical and oil energy savings available from wood and coal use. Admittedly, you can regulate both coal and wood but when the lights go out in Oregon I hope you

remember your decision when the people march on the State Capitol. CHERC appears to be totally ignorant of the energy and economic facts of life.

Evidentially the M.D.'s on the CHERC feel most users of wood and potential users of coal are wealthy. Many people cannot cut their own wood but could afford to purchase coal rather than use high priced oil or electricity. I'm confident that if a survey were made regarding why people use coal or wood, the conclusion would be to save money, not for exercise or the joy of cutting, bucking, splitting, transporting, stocking and feeding a stove. I personally prefer oil or a heat pump but need the cost advantage of wood and coal.

In conclusion, the CHERC report is unobjective and makes statements that have not been verified by actual numbers. How many respiratory cases have been medically attributed to the use of coal induced TSP, S or SO₂? How many of these purported cases heat with wood? How many additional cases might occur due to the relatively minor use of coal in the State? Give the people some numbers based upon research and scientific estimates before you eliminate another right of the people of this State. I also wish to refer the CHERC members to "The Electric Energy Test" primarily due to their comment in Findings and Recommendations II, 2. "Such energy sources can be equipped with adequate pollution controls (coal fired generators) and when combined with use of existing fuels, heat pumps, solar power and wind power should obviate most, if not all, need to use coal in home stoves and fireplaces." This statement should be remembered when the BROWNOUT occurs.

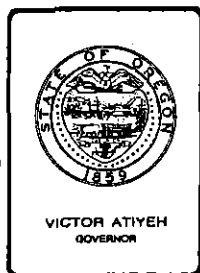
Why do individual free men, when operating collectively, strive to eliminate the rights of other free men?

Sincerely,

Gerald R. Strohane

Gerald R. Strohane
3322 Eucalyptus Dr.
Medford, Oregon 97501

Enclosures



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. F , October 9, 1981, EQC Meeting

Request for Authorization to Hold a Public Hearing to add Amendments to Sulfur Content of Fuels, Coal, Rule, 340-22-020, to Limit Sulfur & Volatile Content of Coal Used for Residential Space Heating

Background

The recent increase in use of wood as a residential heating fuel and the associated air quality impacts have led the Department to an in-depth study of the potential impact of similar increases in coal use. This matter has been researched by the Department for over 1 year, aided by the input of a Coal Health Effects Review Committee. This committee was composed of doctors and medical officials representing prominent national, state and local health agencies. The findings and recommendations of the Health Committee are contained in Attachment 1. The Portland Air Quality Advisory Committee also studied this issue and their recommendations are contained in Attachment 2. Both groups recommended banning use of coal as a residential heating fuel in problem airsheds.

Evaluation

The findings of the Health Committee and the Department may be summarized and evaluated as follows.

Coal Use Potential

- A. Coal is presently being imported to Oregon from western and eastern states and almost 1% of Oregon households now use it as a space heating stove fuel.
- B. The potential for much greater use of coal as a residential space heating fuel in Oregon exists considering:

1. Many Oregonians are recognizing solid fuel space heating as a desirable practice with 15% of households burning wood as a primary heat source and another 39% as a secondary heat source.
2. Readily available wood fuel is becoming scarce with prices topping \$100 per cord in the Portland area and cutting permits backlogged or not available in several areas including the Mt. Hood & Zig Zag Districts.
3. Coal, as a residential heating fuel, is becoming more attractive than wood because of its low price, availability, low chimney fire potential, and far less bulkiness and ability to burn numerous hours without recharging when compared to wood.
4. Coal conversion units for wood stoves are starting to be marketed along with new coal stoves and, for example, 27 of 36 stove ads in the nationally acclaimed Wood and Energy Journal were for combination coal/wood heaters. The largest Oregon wood stove manufacturer, in fact, now markets a coal stove model, and several others are developing coal grate inserts for existing wood stoves. See Attachment 3.
5. Coal is projected to be entering Oregon in much larger quantities in the near future with imminent construction of coal export terminals and conversion of large pulp mill power plants to coal firing.
6. Future pricing of space heating fuels is expected to significantly increase the shift towards solid fuels as a residential heat source, considering 1) natural gas deregulation is expected to raise Oregon rates 66%; 2) inverted electric rates will provide a major incentive to cut down electrical consumption; 3) present oil prices make it the highest cost fossil fuel with no price reduction expected in the future.
7. Coal developers are searching out means to expand the residential coal supply in consideration of abundant domestic coal reserves. Residential coal prices are also expected to remain substantially below other conventional energy sources because of the abundant reserves.

Air Quality Impacts

- A. Available information on residential coal heaters indicate total particulate emissions are as high as present wood heaters. Sulphur dioxide emissions from coal burning are much greater than from wood and can be about 3 times those allowed by Oregon rules for residential fuel oil. Polycyclic organic matter, which includes potential carcinogens, from residential coal units is higher than from wood burning units and up to 4 orders of magnitude greater than from industrial and electric generating facilities which have optimum combustion conditions and control equipment.

B. Detailed projections of air quality impacts from various residential coal use scenarios were developed for the Health Effects Advisory Committee (Appendix 2 of Attachment 1) based on present 1% household coal use, a nominal 5% household use, and a 54% household use based on all projected wood heating households in 1987 converting to coal. The results, using the Portland airshed as a model, indicated:

- 1) Total particulate and SO₂ impacts due to plume downwash in neighboring property could substantially contribute to violation of national health standards.
- 2) Areas of existing high air pollution could experience unacceptable increases of total particulate, sulphur dioxides, sulfates and polycyclic organic matter in the middle to high range of projected coal use.
- 3) Significant increases in soiling, odors and visibility loss and other nuisance conditions would be expected to occur.

Health Effects

- A. Residential coal burning has been associated with the most severe air pollution episode in the world, the notable London "smog" of 1952.
- B. Although not posing nearly the threat to health as cigarette smoking, the Coal Health Effects Review Committee concluded that increased residential coal burning would: 1) hinder efforts to attain existing health standards; 2) cause acute lung symptoms for some citizens; 3) cause an unacceptable increase in polycyclic organic matter (potential carcinogens).
- C. The Health Effects Review Committee unanimously recommended that DEQ prohibit coal burning in residential urban areas, especially those experiencing poor ventilation. The Portland Air Quality Advisory Committee made a similar recommendation.

Control Alternatives

- A. Do nothing until problem actually becomes severe. This was considered unacceptable to the Committees' and the Department since it was considered preferable to prevent new air quality problems and to lessen the economic impact on small businesses and individuals by imposing regulations before major investments in equipment and marketing systems for residential coal use were developed.

- B. Ban residential coal use. This was considered unacceptable to the Department since it would provide no incentive or latitude for industry to develop clean burning residential coal which didn't excessively pollute. Outright banning of residential coal use may also be subject to legal challenge considering present statutory provisions.
- C. Develop emission standards for new coal burning devices. This was considered unacceptable by the Department since it could not address the use of coal in existing stoves and would not address the sulphur dioxide problem in the near future because of lack of promising sulphur dioxide control technology. In addition, DEQ is prohibited by statute from embarking on such a program.
- D. Develop coal-sulphur regulations. This was considered unacceptable in and by itself by the Department on the grounds it would not address the smoke and POM emission problem associated with residential coal burning.
- E. Develop a volatile content of coal regulation. This was considered unacceptable in and by itself by the Department on the grounds it would not address the sulphur dioxide emission problem associated with residential coal burning.
- F. Develop a "clean coal regulation" based on a 0.3% sulphur and 5% volatile content. This was considered by the Department as the most desirable approach to the issue considering that technology is available to desulphurize and devolatilize coal to these levels. Such coal would have emissions in the range of those from light distillate residential fuel oil allowed under Department rules. Such a regulation would have the immediate effect of a spaceheating coal use ban but would provide a means to utilize "clean" coal as a residential heating fuel in the future if energy & economic conditions otherwise warrant it. The most logical areas to apply such a regulation to would be the state's four air quality maintenance areas. Other areas which might be considered in the future would include Bend and Pendleton where wood space heating is beginning to cause significant air quality problems.

Summation

1. Oregonians have demonstrated a significant shift towards solid fuel stove heating as exemplified by the massive increase in wood space heating.
2. The potential exists for major increases in use of coal as a residential solid heating fuel considering: 1) wood is becoming more expensive and more difficult to obtain; 2) coal is becoming more attractive as a residential solid heating fuel, considering its cost, availability, handling and burning characteristics; 3) coal shipments to Oregon will substantially increase in the near future as coal export terminals and industrial coal conversions are constructed; 4) manufacturers are rapidly tooling up to increase marketing of

residential coal burning devices; 5) present and future energy prices will continue to accelerate pressures towards increased residential solid fuel use.

3. Projected air quality impacts from residential coal burning indicate: 1) achieving and maintaining compliance with air quality standards would be more difficult; 2) sulphur dioxide, sulfates and carcinogens would be increased in areas like Portland to a point considered unacceptable by local health experts; 3) nuisance conditions such as smoke, odor, soiling and visibility loss would be greatly accentuated.
4. The Health Effects Review Committee and Portland Air Quality Advisory Committee recommended banning of residential coal use in urban areas. Waiting to regulate after a serious problem occurred was considered unwise by the Committees' on the grounds that adverse health effects should not be allowed to occur and significant economic hardship would result by regulating after a major market had been developed.
5. The Department believes the most prudent approach to the residential coal burning issue is to take preventative control measures and develop a clean coal regulation based on a 0.3% sulphur, 5% volatile content limit. While such coal is presently not available in this country, technology exists to meet these requirements. This technology might be applied if energy and economic conditions become more favorable toward residential coal use. Emissions from coal meeting these specifications would be in the same range as those of residential heating oil. Making such a rule effective by July 1, 1983 in air quality maintenance areas should allow those small number of existing coal users adequate time to develop alternative heating systems.

Director's Recommendations

Based on the Summation, it is recommended that EQC authorize a public hearing on the attached amendments to the Department's coal rule OAR 340-22-020 Attachment 4.

Bill

William H. Young

- Attachments:
1. Coal Health Effects Review Committee Report
 2. Portland Air Quality Advisory Recommendations
 3. Typical Journal Advertising/Articles On Coal Heating
 4. Proposed Amendment to OAR 340-22-020
 5. Statement of Need for Rulemaking
 6. Public Notice

JFK:a
AAD135.2 (1)
229-6459
9/10/81

COAL HEALTH EFFECTS REVIEW COMMITTEE
SUMMARY REPORT
To The
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

April 21, 1981

Chairman: Dr. Max Bader
Members: Dr. John Aitchison
Ms. Frances Costikyan
Dr. Miles Edwards
Dr. Larry Foster
Dr. James F. Morris
Dr. Edward Press
Dr. Charles P. Schade
Prof. Trygve P. Steen

SUMMARY REPORT
TO THE
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
COAL HEALTH EFFECTS REVIEW COMMITTEE*

In October, 1980, the Committee was organized to examine and make recommendations on the risks to health of Oregonians which might result from coal combustion products in the ambient air due to increased coal use in home stoves. The Committee met on 9 occasions to review technical information supplied by its membership and by the Department of Environmental Quality (DEQ).

SUMMARY OF FINDINGS

GENERAL OVERVIEW

Specific recommendations of the Committee should be considered within the following context:

1. Contrary to the general perception of Oregon as an area with remarkably pure air, many parts of the state are more prone to atmospheric conditions (air stagnation) which can result in pollution build-up than many other parts of the world where serious problems have developed. These areas in Oregon include the Portland, Eugene-Springfield, and Medford-Ashland areas. The inhabitants in these regions are already subject to increased health risks due to air pollution. Therefore, these areas need to continue efforts to improve air quality.
2. Coal burning in hand-fired household stoves and fireplaces discharges sulfur dioxide, sulfates, particulates, and benzo(a)pyrene and other polycyclic organic material into the atmosphere. More residential coal burning would increase the concentration of these chemicals in the ambient air and result in their inhalation and deposition into the bronchi and the lungs, and for some materials, absorption and spread through the blood vessels.
3. Polluting agents in the air may interact to create a health hazard, even though taken individually they are not a hazard at a given concentration.
4. Time, dose, and host susceptibility factors are critical to the ability of agents to cause cancer and other illness. Young children are particularly vulnerable to low doses and because they are young,

*Membership of the Committee is presented in Appendix 1.

will be exposed over long periods of time. Even more than adults they should not be subjected unnecessarily to agents which may result in later development of disease.

5. Home stove and fireplace use increases the risk of fire and other safety problems.
6. Aesthetic factors, impaired visibility, acid rain, vegetation destruction, and odor affect the quality of life and can impact on health by affecting mental outlook, the food chain, and recreational activities.
7. Alternatives to burning coal in residential units are available. Large scale boilers or furnaces can burn coal much more efficiently than hand-fired units and reduce the formation rate of B(a)P and other POMs by several orders of magnitude, and with effective pollution control devices can reduce the release of other pollutants such as sulfur dioxide, sulfates, and particulates. Thus there is no reason to expose the general public unnecessarily to increased health risks which may result from increased residential coal burning.

SPECIFIC FINDINGS AND RECOMMENDATIONS

The committee recommends that residential coal burning should not be allowed in densely populated areas of Oregon with pollution problems. The basis for this recommendation is the Committee's concern for adverse health impacts from increased levels of sulfur dioxide, sulfates, total suspended particulates, and polycyclic organic materials. Projections of pollutant increases are presented in the DEQ report entitled "Range of Concentrations to be Analyzed as Part of the Assessment of Health Impacts Due to Residential Coal Burning," which is included in Appendix 2.

1. Sulfur Dioxide (SO₂) - The D.E.Q. 24-hour standard of 260 micrograms/cubic meter (ug/m³)* and the 60 ug/m³ annual standard should not be exceeded; levels as low as 100 ug/m³ for a 24-hour period can cause acute respiratory effects in some people. (1)

* Many pollutant concentrations are expressed in the form of micrograms, or one-millionth of a gram (454 grams = 1 pound), per cubic meter of air. The abbreviated notation which will be used throughout this report is ug/m³.

- (1) Stebbings, J., and C. Hayes. Panel Studies of acute health effects of air pollution. I. Cardiopulmonary symptoms in adults, New York, 1971-1972. Environ. Res. 11:89-111, 1976

2. Sulfates (SO₄) - The level should be kept below a 24-hour average of 15 ug/m³. Asthmatics and the elderly may develop respiratory symptoms at 24 hour average levels of 6-10 ug/m³.⁽²⁾ Long term exposure to the latter concentrations probably contributes to chronic lung disease.
3. Total Suspended Particulates (TSP) - The 24-hour standard of 150 ug/m³ and the annual standard of 60 ug/m³ should be maintained to avoid known and potential interactions with other agents in the air which adversely affect health. Particulates from residential coal burning may also create aesthetic problems by reducing visibility and depositing soot.
4. Benzo(a)pyrene (B(a)P) - This known cancer causing agent is an index for similar agents in the air. No exposure standard has been established. Coal burned in residential units is especially likely to be a major source of B(a)P.
5. Carbon Monoxide - Residential coal use, as a replacement for wood, would not significantly affect carbon monoxide concentrations which have been decreasing over the last five years.
6. Ozone - This is a summer problem that would not be affected by residential coal burning.
7. Nitrogen oxides - Residential coal burning produces about the same amount of nitrogen dioxide per BTU as residential oil or gas combustion and thus is not likely to cause any significant increases in concentrations.

ADDITIONAL RECOMMENDATIONS

1. Coal use in Oregon should be restricted to low sulfur and low ash content coals. Preferably, coal use should be limited to electricity generating plants and industrial users which employ adequate pollution controls.
2. D.E.Q. should undertake further B(a)P monitoring to update its information base for both indoor and outdoor B(a)P levels and for residential heating device emission rates.
3. D.E.Q. should encourage the public to increase energy conservation efforts and to stop cigarette smoking.

⁽²⁾ U.S.E.P.A., Position Paper on Regulation of Atmospheric Sulfates. Research Triangle Park. Publication Number EPA - 450/2-75-007. September, 1975.

COAL HEALTH EFFECTS REVIEW COMMITTEE

Introduction

Oregon may soon become a major western United States terminus for coal shipments to Asia. This may make coal much more available in this state. As a result, it may become a less expensive alternative to other fuels for home heating.

Stoves used for home heating generally do not burn coal cleanly. Use of coal for home heating in a significant number of urban homes could lead to substantial deterioration in air quality. This deterioration would be most serious in areas, such as Portland, Eugene, and Medford, where meteorologic inversions are common.

Among coal combustion products of concern to the Oregon department of Environmental Quality (DEQ) are total suspended particulates, sulfur dioxide, sulfates, carbon monoxide, ozone, nitrogen oxides, and benzo(a)pyrene and other polycyclic aromatic hydrocarbons. These agents can harm both the liveability of an area and the health of people living there.

To help the Environmental Quality Commission reach its determination on what, if anything, should be done to regulate coal usage in Oregon, D.E.Q. formed a Coal Health Effects Review Committee. The Committee's task was to define the known and potential health effects which might result from acute and long-term exposure to these coal combustion products in the

ambient air. The committee considered health effects of different concentrations of coal combustion products upon both healthy people and "high risk" groups including the very young, the elderly, asthmatics and others with very vulnerable lungs, and persons with underlying diseases such as chronic bronchitis and emphysema. The Committee's findings are provided in this report along with several suggestions which it feels deserve consideration.

Overview

The Coal Health Effects Review Committee provides the following general context for its specific findings concerning the known and potential health effects of those air quality factors which it has reviewed. First, it is important for the citizens of Oregon to recognize that many parts of the State are just as prone, if not more prone, to adverse atmospheric conditions that can result in pollution build-up as others areas of the world which have suffered serious pollution problems. Among areas which are already subject to increased risks to health from air pollution during their frequent meteorologic inversions, are Portland, Eugene, and Medford. Air quality in those areas still needs to be improved and must not be permitted to decrease significantly without a most compelling justification. The Committee is aware of no such justification. The

Committee believes that even in a severe national energy shortage, there are preferable alternatives to burning coal in individual dwellings. One alternative is use of coal in large industrial boilers which can burn it more cleanly and control the emissions more efficiently. Gas and oil fuels used by those mid-range industrial boilers could then be diverted to residential heating usage. Another option, given construction time, is burning the coal in large heat and electricity generating plants, where polluting emissions can also be much more effectively controlled. Home coal use is clearly not necessary to serve as an energy source for heating during short term crisis situations such as those which may follow ice storms.

Second, the Committee underscores the need to recognize that there may be interaction between polluting chemicals in the air which may either increase or reduce their effects on health. For example, airborne particulates significantly increase the adverse health impacts of both sulfur oxides and polycyclic organic materials. Although all interactions are not fully understood the Committee considers it prudent to take a conservative approach to protecting human health.

Third, the Committee has considered the present biologic controversy over whether a threshold exposure to an agent must be exceeded for it to cause cancer or other illnesses. Although no clear answers exist to the threshold question, time-dose-host susceptibility factors all affect the ability of agents to cause disease. Young children are the most susceptible to eventually developing chronic illness due to air pollution, because they are likely to be exposed to low doses acting over very long periods of time and because of their vulnerability to lung damage during growth and development of the respiratory system. Therefore, common sense suggests avoidance of unnecessary build-up of air pollutants which, in higher concentrations, are known to affect health, and which at low doses clearly affect aesthetic qualities, if not health. In that context the threshold question becomes largely academic.

The effects of agents which cause cancer and chronic obstructive pulmonary disease are cumulative. Therefore, if prolonged (over 1 year) excessive levels of air pollutants are forecast, a long term strategy aimed at keeping pollutant concentrations down to acceptable levels is essential. However, the Committee does not wish to preclude the option of using low sulfur coal in areas where allowing that freedom of choice will not significantly affect air quality that already meets State standards.

Finally, the Committee wishes to call attention to fire, safety, and aesthetics issues which it has not specifically addressed. Increased residential use of stoves and fireplaces which are fueled by wood or coal significantly raises the risk of fire in those homes, a risk to health which is probably greater than that from carcinogens in the air. In addition, as homes are sealed tighter for weatherization, the hazard of carbon monoxide poisoning and other indoor air pollution increases. Also, aesthetic factors, impaired visibility, effects of acid rain, destruction of vegetation, and odors can affect health indirectly.

The Committee wishes that it could base all of its specific findings and recommendations on solid, irrefutable facts. In environmental health, this is often not possible and best judgments must therefore be made. The Committee's findings with respect to sulfur dioxide have extensive support in the medical literature. Its findings concerning benzo(a)pyrene and similar agents are substantially based upon deductive reasoning using studies reported in the medical literature that were not specifically related to the problem at hand. Nevertheless, the lack of better information is not justification for ignoring that which is available. The additional information would merely be helpful in establishing more precise limits.

FINDINGS AND RECOMMENDATIONS

I. Findings and Recommendations Regarding Specific Pollutants

Total Suspended Particulates — TSP are a mixture of manmade and natural materials that contain silicon, sulfur, nitrogen, carbon, and lead and vary from area to area. Particulates with a diameter less than 10 micrometers will enter the lower airways of the lungs. (3,4) TSP represents an index of pollution rather than a specific pollutant. Twenty-four hour concentrations are usually safe below 150 ug/m^3 for the general population.

The committee endorses the Oregon particulate standards of 150 ug/m^3 on a 24-hour basis and 60 ug/m^3 on an annual basis and urges DEQ to continue in its attempts to attain and maintain TSP standards. The committee notes that although the relative amounts of particulates as expressed as mass per BTU of wood or coal burned are approximately the same, particulates resulting from residential coal combustion can be expected to be more hazardous to health due to much higher levels of benzo(a)pyrene, sulfur dioxide, sulfates and heavy metals such as mercury. Since the Portland, Medford/Ashland, and Eugene/Springfield areas already exceed particulate standards, the introduction into these airsheds of an additional source of harmful particulates would make future efforts to attain standards even more difficult.

Sulfur Dioxide - Standards are difficult to establish because of the complex chemistry of sulfur oxides (SO_2) and the variability of human response to them. SO_2 can be transformed into other forms such as particulate aerosols which may be biologically more damaging than SO_2 . Thus like TSP, SO_2 levels serve as indices of pollution.

(3) International Radiological Protection Commission, Deposition and Retention Models for Internal Dosimetry of the Human Respiratory Tract, Task Group on Lung Dynamics. Health Physics 12:173-207, 1966.

(4) Stuart, Bruce O., Deposition and Clearance of Inhaled Particulates. Environmental Health Perspectives 16:46, 1976.

The committee recommends that the present Oregon SO₂ standards of 260 ug/m³ over a 24 hour period and 60 ug/m³ annual average be maintained. Because exposure to SO₂ causes adverse physiological effects to the respiratory system and impairs ventilation at levels as low as 100 ug/m³,⁽⁵⁾ the DEQ is encouraged to take preventive actions to ensure that the 24-hour Oregon SO₂ standard is not exceeded even during episodic conditions.

Twenty-four hour SO₂ concentrations in the Portland area already exceed 200 ug/m³ on some peak days. The increased SO₂ concentrations which could occur with heavy coal burning or from internal smoke leaks or downwash conditions (from an individual unit) combined with already existing ambient levels on peak days would cause acute lung symptoms for some citizens whose airways are especially sensitive to SO₂.

Sulfates - The Committee recommends that DEQ should attempt to manage the airshed such that peak 24-hour SO₄ concentrations are maintained below 15 ug/m³. The Committee adopts this position with the knowledge that there is currently no Oregon or Federal SO₄ standard, and on the basis that some adverse health effects have been observed to occur at concentrations below 15 ug/m³. For example, effects on the elderly have been reported at 24-hour concentrations of 8-10 ug/m³ and effects on asthmatics at 6-10 ug/m³.⁽⁶⁾ The Portland area already experiences winter monthly average sulfate concentrations of 7 ug/m³; sulfates from residential coal burning would be concentrated in populated areas.

Carbon Monoxide - The amount of carbon monoxide (CO) which would enter the atmosphere is about the same whether coal or wood is burned. CO levels have been decreasing despite increased wood usage in recent years. Thus, carbon monoxide is not considered to be a problem affected by coal use in residences.

Ozone - This is a summer pollutant problem which would not be affected by residential coal use.

Nitrogen oxides - Residential coal burning produces about the same amount of nitrogen dioxide (NO₂) per BTU as residential oil or gas combustion and thus is not likely to cause any significant increases in NO₂ concentrations.

⁽⁵⁾ Stebbings, J., and C. Hayes. Panel Studies of acute health effects of air pollution. I. Cardiopulmonary symptoms in adults, New York, 1971-1972. Environ. Res. 11:89-111, 1976.

⁽⁶⁾ EPA Position Paper on Atmospheric Sulfates. 1975. (See Footnote 2.)

Benzo(a)pyrene and Polycyclic Organic Materials - Polycyclic organic matter (POM) includes benzo(a)pyrene (B(a)P) and other polycyclic aromatic hydrocarbons. B(a)P is an indicator, or marker for the presence of POM in air. B(a)P, as well as some other polycyclic aromatic hydrocarbons included in POM, act as initiating agents for cancer in animals⁽⁷⁾ and man.⁽⁸⁾

In the late 1960's, annual average concentrations of B(a)P generally ranged from 2.3 to 4.8 nanograms/cubic meter (ng/m^3)* in Portland, Eugene, and Medford.⁽⁹⁾ A high value of $8.2 \text{ ng}/\text{m}^3$ B(a)P was recorded in Medford in 1968. Although annual average B(a)P concentration data are not available in Oregon after 1970, nationally the average of 28 urban sites for which such data are available (including some Pacific Northwest locations, i.e. Seattle) dropped from $2.4 \text{ ng}/\text{m}^3$ to $.6 \text{ ng}/\text{m}^3$ between 1970 and 1976.⁽¹⁰⁾ Current levels in Oregon are not known but there is evidence^(11,12) to suggest B(a)P concentrations have climbed since 1976 and that they may be as high as or higher

* Concentrations of benzo(a)pyrene are commonly expressed in units of nanograms per cubic meter (ng/m^3) or one-billionth of a gram per cubic meter.

- (7) Health Assessment Document for Polycyclic Organic Matter. U.S. Environmental Protection Agency. Research Triangle Park, North Carolina. Publication No. EPA-600/9-79-008. Pages 6-85 to 6-133, 1979.
- (8) Health Assessment Document for Polycyclic Organic Matter. Pages 6-186 to 6-220. 1979. (See Footnote 7.)
- (9) Scientific and Technical Assessment Report on Particulate Polycyclic Organic Matter (PPOM). U.S. Environmental Protection Agency. Washington, D.C. Publication No. EPA-600/6-75-001. 1975. In: Health Assessment Document for Polycyclic Organic Matter, pages 5-9, 1979.
- (10) Health Assessment Document for Polycyclic Organic Materials. Pages 5-13 to 5-14. 1979. (See Footnote 7.)
- (11) Nilsson, Jan, Combustion of Wood/Environmental Restrictions in Sweden. National Swedish Environmental Protection Board. February, 1980. The report states that typical B(a)P levels within 30 meters of a wood stove are $10-20 \text{ ng}/\text{m}^3$.
- (12) Fajer, Mike, Summary of Medford Historical Benzene-Soluble Organic Data, Oregon Department of Environmental Quality, 5-13-80. Data shows a 102% increase in annual average Medford levels of benzene-soluble organics between 1971 and 1979.

than 1968 levels due to significant increases in residential woodburning. If the medium projected level of residential coal burning were to occur in the Portland airshed, the annual average B(a)P air concentration would increase by 3.9 ng/m³ in the highest concentration 2x2 kilometer grid in which 9,000 people reside* (see Appendix 2). Where residences are close together and because of local downdraft conditions or indoor smoke leaks, concentrations could be much higher.

The Committee cannot predict precisely what health impacts would result from B(a)P and other POMs introduced by increased residential coal burning. The Committee recognizes the complexity of analyzing environmental causes of cancer and dose response factors.⁽¹³⁾ The absence of an association of lung cancer with past levels of B(a)P and POMs may be due to masking of their effects by the much larger effect of cigarette smoking. However, it is known that persons who smoke a few cigarettes daily, each of which may result in B(a)P exposure equivalent to an annual average exposure of .67 ng/m³ of B(a)P⁽¹⁴⁾ (as well as other cancer causing agents) experience higher lung cancer rates than non-smokers. People exposed to annual average B(a)P levels of 3.9 ng/m³ would be exposed to the same amount of B(a)P as individuals smoking 6 cigarettes per day. This raises the concern that a carcinogenic effect might occur from the residential coal burning; however, because other POM's and their interactions may be different for cigarette smoking and residential coal burning, and because the POM levels actually reaching lung tissue may be different, it is probable that equivalent dosages of B(a)P from cigarette smoking and residential coal burning would not result in a cancer-causing effect to the same degree.

The Committee, recognizing that no national exposure standard has been established for B(a)P and POMs despite their known cancer causing capabilities, therefore recommends that B(a)P in the ambient air not be permitted to increase above current levels.

(13) Maclure, K.M. and MacMahan, G: An epidemiologic perspective of environmental carcinogenesis. In: Epidemiologic Reviews. Sartwell, P.E. and Nathanson, N. (ed.) 2:12-48 Johns Hopkins Univ. Press. Baltimore, MD. 1980.

(14) Bridbord, K. et al., Human Exposure to Polynuclear Aromatic Hydrocarbons. In: Carcinogenesis, Vol. 1. R. I. Freudenthal and P. W. Jones (ed.), Raven Press, New York, 1976.

*The 260,000 people in the densest 50 square miles of the region would be exposed to average additional levels of 2.5 ng/m³ of B(a)P from this amount of coal burning.

II. Recommendations for Action Regarding Coal Burning

1. DEQ should restrict coal use in Oregon to the lowest sulfur content coals on a B.T.U. basis. Low ash coal is also desirable.
2. DEQ should prohibit coal burning in individual dwellings in all urban areas of Oregon and additionally in those areas where stagnant air is common. The preferred use of coal is in large industrial boilers and relatively clean burning, coal-fired plants which generate electrical power and can be located outside of areas that are subject to serious air pollution e.g., Boardman. Such energy sources can be equipped with adequate pollution controls and when combined with use of existing fuels, heat pumps, solar power and wind power should obviate most, if not all, need to use coal in home stoves and fireplaces.

GENERAL AIR POLLUTION SUGGESTIONS

1. DEQ should encourage increased energy conservation efforts by the general public and industry in order to lessen future reliance for energy upon fuels which pollute the air.
2. DEQ should recognize that the long-term health effects of cigarette smoking are of far greater significance than home stove and fireplace coal burning under most foreseeable scenarios. Consequently, in its public pronouncements on air quality, DEQ would be well advised to encourage people to stop smoking whenever the opportunity presents itself.
3. The DEQ should undertake additional measurements of indoor and outdoor B(a)P levels. These recommendations should not be interpreted as a statement by the Committee that no action on residential coal burning is justifiable until such additional information has been gathered. Rather the Committee urges that DEQ attempt to improve its information base on likely and potential future B(a)P levels such that health effects from such compounds may be better understood in the future.
 - a. DEQ should undertake emission factor studies to determine whether the mid-range B(a)P emission factors it has provided to the Committee are realistic.
 - b. DEQ should undertake representative periodic ambient air B(a)P monitoring to help determine whether potential coal-related increase in B(a)P emissions would raise ambient levels to concentrations of concern.
 - c. DEQ should attempt to verify whether its estimates of B(a)P concentrations from down wash situations or internal smoke leaks are realistic in order to help determine whether these situations pose a risk to health. This can be done by either DEQ source testing or by reviewing monitoring work being done by other researchers.

APPENDIX 1

Membership of
COAL HEALTH EFFECTS REVIEW COMMITTEE

Dr. John Aitchison
Chief, Toxicology Section
Department of Clinical Pathology
University of Oregon Health Sciences Center

Dr. Max Bader (Chairman: Coal Health Effects Review Committee)
Oregon State Health Officer
Oregon State Health Division

Ms. Frances Costikyan
Executive Director
Oregon Lung Association

Dr. Miles Edwards
Head, Division of Chest Diseases
Department of Medicine
University of Oregon Health Sciences Center

Dr. Larry Foster
Communicable Disease Control Officer
and Assistant State Epidemiologist
Oregon State Health Division

Dr. James F. Morris
Chief, Pulmonary Disease Section
Portland Veterans Administration Medical Center

Dr. William Morton
Head, Division of Environmental Medicine
University of Oregon Health Sciences Center

Dr. Edward Press (Retired Oregon State Health Officer)
Chairman, Public Health Committee
Oregon Medical Association

Dr. Charles P. Schade
Multnomah County Health Officer
Multnomah County

Mr. William Shafer
American Cancer Society

Prof. Trygve P. Steen, M.P.H., Ph.D
Department of Biology
Portland State University

The Coal Health Effects Review Committee was initially formed by DEQ. Members with specific expertise were added upon suggestion. Members representing specific interest groups gave their personal opinions which are reflected in the policy recommendations. Although the report did not receive formal clearance or approval to date by the governing bodies of the organizations represented, the individuals involved did attempt to forward the position of the organization they represented to the best of their ability.

April 14, 1981

AR850.1 (2)

The Electric Energy Test
Transcript
Aired, September 12, 1979

A

Man-On-Street Interviews - 1. You're always asking me to conserve but my (MOS) bills just keep going up.

2. Why can't I get my electricity connected immediately?

3. It used to be beautiful up here, but now it's getting too crowded.

4. We've got plenty of electricity, why do we need new power plants?

Steve Allen - No more electricity. There are those who fear this may be our destiny. Blackouts, brownouts, freeze outs. Others insist we have plenty of sources for electricity to take us into the year 2000. Is the answer the clean, free, plentiful, almost ageless power from 93,000,000 miles up? Or, down to earth, and deep within, for heat, stored there? Some people are convinced the only answer is the wind. And then there's the Northwest's main stay - hydro power; but also the region's coal and nuclear plants. And the pursuit is on for still other possibilities such as wood waste or garbage. But there is one basic premise about which there's little disagreement - without sources of electricity, we cannot continue our present life styles. But the search for economical supplies, and fair distribution is complicated, confusing and often contradictory and that's why we brought you all together. Our in-studio audience chosen to be a representative cross-section of our region and some of the top experts in the country, a sampling of opinions and attitudes throughout the

Steve Allen - Northwest and you. So get ready, use the score card published in your local newspaper or just follow along on a piece of paper with our studio audience here. The idea is to get a feeling of what we know and don't know about a crucial problem of our times. It's a quiz show really on our electrical life plug, the power that runs civilization. The name of the game is "The Electric Energy Test."

Announcer - "The Electric Energy Test!" The time to test your wits on the who's, the why's, and, of course "watts" of the electricity business. And now here is your host, Steve Allen:

Steve Allen - Thank you, thank you very much. Welcome indeed to the Electric Energy Test, and the prize, well it won't be money, furniture or a new car. No the prize in this contest might very well be, survival. I know we were wasting electricity back here, and I promise we won't do that again. But it does lead us to our first quiz category and it looks like an easy one, let's find out what we really know now about the demand or need for power.

The bigger the population, the bigger the needs and the bigger the demand for electricity. If the power is available, will that invite more people; thus demanding more power? So what is it we do know about growth and the demand for electricity? Got your score cards ready? Alright. We'll start by taking just one state in the northwest, Oregon. Present population of Oregon is 2,300,000. If we were to take all the population predictions and go by the

Steve Allen - lowest, most conservative one:

Question 1: By how much will Oregon's population increase by the year 1990? You have a choice of three answers:

- a. 100,000 people.
- b. 300,000 people.
- c. 600,000 people.

Now while our studio audience and you at home mark your score cards we're going to show you a series of interviews. Let's go to Medford near the Oregon - California border and see how people there feel about the influx of newcomers.

- MOS #1: Oh, Oh, Oh. Well I'm a native Oregonian, I was born in Medford and I think that all these people that are moving into Medford, ought to move out of Medford, go back to where the heck they came from.
- MOS #2: Well, your town has to grow.
- MOS #3: Oh, I guess it's allright.
- MOS #4: There's too many people, way too many people.
- MOS #5: I like a small town, but it's getting to be a big town.
- MOS #6: You think of Oregon as being sparsely populated and I hate to see if overpopulated like Southern California.
- MOS #7: Yeah, I just moved up from Southern California.
- MOS #8: I think Oregon is a state for Oregonians.
- MOS #9: If you don't get some new people coming in, you don't get business either.
- MOS #10: They should all go back where they came from.
- MOS #11: Well, this is a free country isn't it?
- MOS #12: I think it stinks.
- MOS #13: You know if I can move up here, why can't the rest of them, I really don't mind at all.

Steve Allen - Well we'll see now how well our studio audience did with our first question. They were a chosen you know as a cross-section of the Great Northwest population to represent you folks at home there. Hi folks. As we see the answers they selected, you people at home compare your answers with theirs. It's very interesting; 3% of our studio audience, chose "a", 41% chose answer "b" and 56% chose answer "c". Well the answer that came closest to the most conservative estimate is 600,000. It comes from the U. S. Department of Energy and the Bonneville Power Administration. From the BPA department in charge of forecasting population and employment; George Guinnett, Mr. Guinnett, what is Oregon's population future?

George Guinnett - (BPA) - Bonneville Power Administration estimates that about 480,000 people will have been added to Oregon's population between 1970 and 1980. We further estimate that Oregon's population will reach 2.9 million in 1990 and 3.3 million in the year 2000.

Steve Allen - Some authorities disagree with the BPA's estimates. Among them, Edward Schafer of Portland State University, who thinks population growth will be higher.

Edward Schafer (PSU) - See these buildings, they're electronics industries and they're labor intensive, which means they attract a lot of people to Oregon, and a lot of population projections don't

Edward

Schafer (PSU) - take these into account. And what about the retirees and the tourists? They're bound to change the nature of the population and the use of power within the state. Oregon is such a nice place to live, that we can almost be assured of continued high levels of immigration throughout the 1980s.

Steve Allen - John Ellis, President and Chief Executive officer of Puget Sound Power and Light, says the growth in his area is symbolic of the entire Northwest.

John Ellis, President of Puget

Sound Power & Light Co. - The growth our Company has been experiencing is way more than we've even anticipated. Last year, for example, we added 31,000 new customers. This year, we're adding them at the rate of 125 customers every working day.

Steve Allen - ~~Well, there you have it. No two forecasts the same.~~ But there is one common denominator; population is growing, and it's going to continue. In one county alone, Deschutes in Oregon, population mushroomed forty percent faster than the whole state. And the State of Oregon is growing two and a half times the national average, with that in mind, let's look at the entire Northwest. The next three questions are in a cluster and involve the Northwest group of states. The answers will be based on official state population forecasts.

Steve Allen - First, it would help to know that the present population out here is about 8 1/2 million. So:

Question 2: By how much will this population increase by the year 1990?

- a. By half million?
- b. By one million?
- c. By two million?

Question 3: How many more electricity customers will that mean by the year 1990?

- a. Half million?
- b. One million?
- c. Two million?

Each year Bonneville Dam produces about 4,870,000,000 kilowatt hours.

Question 4: To satisfy electricity demand in 1990, how many more Bonneville Dams would be need?

- a. More than 5 Bonneville Dams?
- b. More than 10 Bonneville dams?
- c. More than 20 Bonneville dams?

Now while we count up the answers, how many people actually know what a kilowatt hour is? Do you? Well think it over. We'll take you now to the University of Washington where they certainly ought to know, one would think.

MOS #1: It's how you measure electricity.

MOS #2: I don't know what a kilowatt hour is.

MOS #3: Kilowatt hour?

MOS #4: I don't know.

MOS #5: So a kilowatt hour is the amount of flow within one hour?

- MOS #6: Don't you have another question?
- MOS #7: I don't know.
- MOS #8: Well, I think it's the amount of kilowatts used in an hour.
- MOS #9: Based on measurement of electricity, but I don't remember what it is.
- MOS #10: Kilo means thousand, so I imagine it's a thousand watts per hour.
- MOS #11: Oh God, and I'm even supposed to be a science person.
- MOS #12: I'm a communications major, don't ask me.
- MOS #13: It's just not my major, I can't answer these questions.
- MOS #14: You're asking the wrong person.
- MOS #15: Oh wow, do you just want me to take a stab at it?
- MOS #16: What is a kilowatt hour?

Steve Allen - A kilowatt hour is a unit of electrical power equal to 1,000 watts used per one hour. And that's a lot if you compare it say to the average light bulb, that burns about 100 watts.

Let's see how the studio audience voted. Nobody at all voted for "a", 14% voted for "b" and 86% voted for "c". The answer to question 2 is "b", even though it got a vote of only 14. The overall population of this area is estimated to increase by over 1,000,000 by the year 1990. That's an increase of 14% and that means more than 480,000 additional customers.

Answer "a" is the right one for question 3. As for the requirement in billions of kilowatt hours that answer is more than the yearly output of 14 Bonneville dams. Or, 69 billion kilowatt hours needed by the year 1990. Now with all

Steve Allen - this emphasis on our region, you'd think the United States looks something like this. So, this question involves three of our cities; Seattle, Portland, Casper and New York.

Question 5: In which of these cities do people use more electricity, per household, each year in their homes?

Mark your score cards. Well sir, here's how our audience voted:

- a. 40%
- b. 13%
- c. 28%
- d. 19%

Now of the four cities, the highest annual consumption takes place in Seattle with almost 13,000 kilowatt hours per household. Second is Portland with just more than 11,000 kilowatt hours, third is Casper, Wyoming with slightly more than 7,000 and the poor fourth or rich fourth, as the case may be, is New York with 3,400. Little weird? Well, not really. New York you see has had a substantial supply of natural gas and fuel oil for heating and therefore has become more dependent on those things. Our region on the other hand, traditionally has had a ready supply of electricity. So that's the answer to what might otherwise seem peculiar.

So here we are back at home again now for question number six.

Question 6: Which is the greatest user of electricity?

- a. Industry
- b. Residences
- c. Commercial enterprises.

Steve Allen - The seventh question is on how we use electricity in our homes, as you may know the heaviest demand is on heating. What would you say is the largest electricity user in the home after that?,

- a. Water heating
- b. Cooking
- c. Refrigeration
- d. Lighting

The eighth question in this group also involves the home. Pacific Power & Light last year added close to 21,000 new residential customers. What percentage of these new customers installed electrical heating?

- a. 27%
- b. 79%
- c. 86%

While you at home are marking your score cards and so are the folks here, let's take our cameras now to Washington Square near Portland as people respond to the question, "What type of heating do you have at home and why?"

- MOS #1: I have forced air gas heat and I have it because that was what was in the house when I bought it.
- MOS #2: We have oil heat, because it was there when we bought it.
- MOS #3: Oil heat. It was in there when we moved in the house.
- MOS #4: We've always had forced air gas.
- MOS #5: It's floorboard steam heat, and I wouldn't move out of it because of it, because the heating bill is steady monthly.
- MOS #6: Electric. It's good heat, I think, it don't seem any more expensive than any of the others.

MOS #7: Well, we did have electric baseboard, but we went to a wood burning stove because it's a lot cheaper.

MOS #8: If they knew how little our bill was, they'd probably raise their rates.

Steve Allen - ~~The first question was the easiest.~~ The heaviest users of electricity are industries, with more than 48%, followed by residences at 32%. Commercial use is a low 14%. After space heating the heaviest use of electricity in homes is for water heating, 13%. Cooking is next at a touch above 3 1/2%, followed by refrigeration, just below 3%. And surprisingly, lighting is the lowest, at about 2 1/2%. And even though space heating uses up more electricity at home than anything else, 79% of PP&L's new customers installed electric heating. The figures in the coastal states, a whopping 92%. Now in that we're concerned about the supply of electricity, we took our cameras to the Saturday Market in Portland and asked people there how they feel about banning electric heat in new homes.

Spall
Deating
75%

MOS #1: Prohibited? I don't think anything should be prohibited.

MOS #2: I don't think it would be a bad idea.

MOS #3: Outlawing it is not going to solve the problem, it's only going to make it worse by the fact that you're stopping the problem and creating a new one.

MOS #4: Well I think to use electricity for heating is completely ridiculous.

MOS #5: Okay I do not. I think it is a real efficient, clean source of heat at this point.

MOS #6: If we don't use electricity, what are we going to use?

MOS #7: We could heat every house in the Pacific Northwest with electricity if we didn't make aluminum.

MOS #8: I mean they're going to generate electricity eternally from the Columbia, are they not? I see no reason to prohibit it.

MOS #9: No, because that's one of the cheaper ways to go, all electric.

MOS #10: I don't think it ought to be prohibited but I'd like to see more people get into solar heating, a lot more people.

Steve Allen - Quite a scene; population increasing, more electricity. More jobs for electricity, more industry, more electricity. The consensus is that by the year 2000 electricity requirements will triple. Well there's one area where increased electric use hit right at home. The very food we eat. That's right. As more and more land has been used for housing, for industry and other purposes, agricultural land has been reduced. So what has allowed us to feed all those new mouths? Well a big part of the answer is modern technology, powered by electricity.

Ellie - More food is being produced on less land which requires more Charvet
(Semtag fertilizer, insecticides and machinery. This circle right here Farms)
covers 120 acres and can go around in 24 hours or it can take as long as three days to go around. It has 10 electric motors on it, which runs day and night, 24 hours a day, 7 days a week for approximately 80 days. It all takes electric power and so far there's no substitute for it.

Steve Allen - The catalyst for increased electric use can be a new house, farm or factory setting off the chain reaction of needs.

Steve Allen - Sewage disposal, water treatment, irrigation, pollution control. And it's that demand that has skyrocketed creating a tremendous problem in supply.

The most abundant and simplest source of energy in the Northwest of course, is water. However, while population and industry are growing, the availability of additional hydro power is not. The reasons: protected wilderness legislation preserving wild and scenic rivers. The few hydro sites still available have much less energy potential than the established ones. All of which is part of the supply problem, a crucial one, because of those increasing demands we mentioned. And that's what this category is all about. Getting power from plant to customer is an extremely complex job. This fact was recognized with the formation of the Northwest Power Pool to coordinate production and distribution of electricity.

Merrill

Schultz (NWPP) - Coordination is the key word. Our basic responsibility is to make the 114 or so utilities in the pool operate as efficiently and as reliably as if they were a single entity.

Steve Allen - Utilities have been criticized for selling power to customers outside the region. Now with all this talk about shortages, how to you defend that?

Merrill

Schultz (NWPP) - Power is sold outside the region from time to time. The utilities of the Northwest attempt to install enough generation so that the needs of Northwest customers can be met under adverse or critically low hydro conditions. This means, that when water conditions are better than critical, the Northwest has surplus energy. But even then, no energy is exported until the needs of all Northwest customers are completely taken care of.

Steve Allen - Wouldn't the addition of new generators on existing dams add to our power supply?

Merrill

Schultz (NWPP) - Except in a few cases it would not. It would only allow us to use up our existing supply of water faster; allowing us to provide more electricity, but for a shorter period of time. In other words, more peaking capability.

Steve Allen - Okay, here's Question number 9, about the Northwest Power Pool.

Question 9: There are 114 members of the pool, how many of those generate electricity?

- a. 20
- b. 80
- c. 114

Now, while you're working on the answers, let's go to Bend, Oregon to find out who should make the major decisions on the subject of electrical energy?

- MOS #1: I think the people should be making a lot of the decisions.
- MOS #2: Well, people who are using it.
- MOS #3: Because that's the society we live in, it's the people's choice.
- MOS #4: Well.
- MOS #5: I think the people should be.
- MOS #6: I'm not really into things like that.
- MOS #7: Everybody.
- MOS #8: Supposedly this is a democracy and that's what our government has been elected for, is to carry out the will of the people.
- MOS #9: The utilities should be making the decisions.
- MOS #10: People.
- MOS #11: It should be a combination of people. It shouldn't be one group entirely I don't believe.
- MOS #12: Of the people that are using the energy.
- MOS #13: I think the people should. They're the ones that complain about everything.
- MOS #14: But, it's not for any single body to decide.
- MOS #15: It think that's the people, shouldn't they?

Steve Allen - For the answer to our question, let's get it first hand from Schultz.

Merrill

Schultz (NWPP) - Only about 20 of the pool utilities generate substantial amounts of electricity. The rest purchase most of their requirements from other pool utilities.

Steve Allen - To date, producing electricity has been taking place on what's been described as the "hard path." That is using established hydro, coal, oil and nuclear power sources. What

Steve Allen - is referred to as the "soft path," however, is dominated by renewable resources such as the sun and wind and conservation. As the decade progressed, it's become more apparent that the answer might be a combination of both hard and soft paths. But dealing with any of these sources isn't easy. They all involve controversies as to cost and environmental impact. This time, let's check your energy I.Q. on the hard path. What's involved in building these installations for additional sources of power, question number 10.

Question 10: Let's say we're building a coal burning plant. How long, without unusual delays, would it take to build a coal plant from the time notice of intent is filed?

- a. 4 years
- b. 6 years
- c. 8 years

Question 11 involves matters nuclear.

Question 11: How many years would it take to build a nuclear fuel plant to the point that it is producing energy?

- a. 6 years
- b. 9 years
- c. 12 years

While we're tabulating now, let's check out a sampling of opinions on a rainy day in Kalispell, Montana. What form of electric energy should we pursue and when?

MOS #1: Well definitely here in the Northwest, this is a hydro-electric area.

- MOS #2: Low sulfur content of the coal that we have down in Southeastern Montana.
- MOS #3: If nuclear energy could be made safe.
- MOS #4: I think people should abandon their cars, and grab their bicycles and start peddling.
- MOS #5: We are making use of the wind energy.
- MOS #6: I think that either solar or nuclear or anything like that.
- MOS #7: Boy, you're asking a good question.
- MOS #8: Right here in the Northwest, I think we should be going after hydro-electricity.
- MOS #9: Well, we know that all the natural resources are running out and with the increasing population, we're going to have to get something that will just keep on going.
- MOS #10: I think we could burn garbage and get electricity like Germany does.
- MOS #11: I think buffalo chips, and I think that's the way to go.

Steve Allen - The source for the answers by the way is the Pacific Northwest Utilities Conference Committee. According to its studies, it takes about six and 1/2 years to build a coal-fired plant. As for a nuclear fueled plant, again without unusual delays, -9 years.

Mike McCormick - When it comes to electric energy production in the Northwest (U.S. Congressman we're in serious trouble. All the major plants that we have State of Wash.) under construction, our seven nuclear plants, our coal plants, are all running behind schedule. Three, four, five years behind schedule. It's important to understand how critical this is to the people of the Northwest to how much their power is going to

Continued

Mike

McCormick - cost them and how much the delay is going to cost us. Because each of these plants falling behind a large plant is costing us between \$100 and \$150 million dollars a year. That's what the ratepayers are going to have to pay. All the people of the Northwest, all of us that are paying our electric bills are going to have to pay much more because of these delays.

Kristie
Duyekinck
(Trojan
Decommissioning
Alliance)

The demands of the Trojan Decommissioning Alliance is that Trojan be shut down. We don't need nuclear power and we don't want it. We have been participating in legislative and initiative processes for a long time and the regulators and legislators haven't been listening to us. We feel that we want to take our demands to the people through an education and non-violent direct action campaign. And we also feel that through these tactics a lot of people have been joining us and we are much closer to shutting Trojan down.

Steve Allen - On the one hand, utilities companies are in pursuit of all forms of energy to fulfill their legal responsibilities to meet increased customer use. On the other hand, environmentalists, concerned about pollution, accidents and rising costs, think our needs can be met better by more effective use of the energy we have, and those renewable sources such as sun and wind. An American consulting physicist, Amory Lovins, is a strong supporter of that "soft path."

Amory Lovins - We've been following an energy policy of strength through
Physicist
(Friends of the Earth) exhaustion. Find more fuels, dig them up faster, burn them

Amory Lovins - in big centralized plants, especially to make electricity. And as a Harvard business school study has recently concluded, that sort of strength through exhaustion policy just doesn't work; it gives us too little, too late, too expensive. It's also environmentally and politically very unpleasant. I think it makes a lot more sense to try a softer energy path in which first of all we ring several times as much work out of the energy we've got, and we know how to do that in a way that doesn't change our lifestyles and would save us a lot of money. And then, we can gradually shift over quicker than building power stations, to a wide range of benign renewable energy sources; sun, wind, farm and forestry wastes, water, which supply the right kind and the right scale of energy to do each task most effectively, I call these the "soft technologies."

Irwin Stelzer - The encouraging thing about the whole energy situation is (Nat'l Economic Research Association) that we have such a variety of paths to chose from. It would be a folly in the extreme to try to pick a hard path or a soft path. What we have to do is let people explore, given the proper price signals, what paths are most efficient for them, what most suits their requirements and then let them get energy in that form.

Steve Allen - And on any path toward the decision making process, we have an unwanted guest, a catalyst sure to effect the direction, it's called pollution. Environmentalists, as well as govern-

Steve Allen - mental and consumer agencies, are taking increasingly active roles in trying to clean up our breathing space. Let's get some idea of what we know about some fundamentals, like which electric energy sources are the dirtiest. In that connection, get ready now question number 12.

Question 12: We're going to list 9 sources of electrical power, including some earmarked for the future. Without any pollution control equipment, rank the dirtiest, the second dirtiest, the third and so forth. Start by putting a number 1 by the most unhealthy one. So here they are:

___ hydro electricity

___ coal

___ gas

___ oil

___ nuclear

___ geothermal

___ wind

___ solar

To find out what are the worst pollutants we took our cameras to Washington, D. C. and the Environmental Protection Agency.

Dave Tunderman, which are the worst pollutants?

Dave

Tunderman - EPA - Without environmental controls, nuclear energy is our riskiest form of power. Then comes coal, followed I guess by oil. Natural gas is our cleanest fuel, of course all plants now are subject to environmental controls. All new power plants are now required by EPA

Dave

Tunderman - EPA - to remove 90% of their sulfur emissions. And I understand that a power plant in Washington eliminates over 99% of its particulates.

Steve Allen - Let's talk about some of the alternatives. Here's question 13, regarding the amount of the sun's energy striking the earth in two cities, Los Angeles and Seattle. We all know of course about sunny Southern California.

Question 13: How much more sunlight strikes the earth in Los Angeles as compared to Seattle?

- a. 10% more
- b. 55% more
- c. 127% more

Now let's collect that sunshine and compare minimum solar collector sizes in the same two cities, Los Angeles and Seattle. We're given these facts: The collector requirement is to supply half of the energy needed for heating water for a family of four. So given those facts, answer question 14.

Question 14: What size would our collector in Seattle have to be compared to the one located in Los Angeles?

- a. The same size
- b. Twice as large
- c. Three times as large

Question 15 involves windmills.

Question 15: How many windmills with blades 200 feet long, over how many square miles, would it take to power the city of Portland? This of course, is in the absence of any other source of power.

- a. 100 windmills over 64 square miles
- b. 200 windmills over 128 square miles
- c. 400 windmills over 256 square miles

Steve Allen - Problems with nuclear energy have been punctuating the headlines as we all know, sometimes on a daily basis, particularly since the accident at Three Mile Island in Pennsylvania. But what do we really know about the nuclear power situation here? Well, consider question 16.

Question 16: How many nuclear plants are now actually operating in the Northwest?

- a. Less than 5
- b. Less than 10
- c. Less than 15

Question 17: What percentage of all electricity in the Northwest is generated by nuclear power?

- a. Less than 10%
- b. Less than 25%
- c. Less than 50%
- d. Less than 75%

While you're marking your score cards, that's it, you're hard at work here. Let's go to Pendleton, Oregon and ask if it were up to you which source of electricity would you use?

MOS #1: Probably chose geothermal or solar.

MOS #2: I think I'd chose the sun source.

MOS #3: Solar.

MOS #4: Solar.

MOS #5: I think water power.

MOS #6: Hydro-electric.

MOS #7: Oh, you're putting me on the spot because my husband works for the power company.

MOS #8: Probably from the sun.

MOS #9: The sun, I love the sun, it's warm, bright.

MOS #10: I'd use solar energy because it's natural and I like the sun.

MOS #11: The sun.

MOS #12: Well it won't nuclear.

MOS #13: Sometimes I think that the nuclear power is efficient.

MOS #14: Because it depends on how many people get involved in it, and how much it costs when they get through fooling with it.

MOS #15: I don't know, I suppose that wind would be the least expensive.

Steve Allen - The answer to our question on solar, "b" is the correct answer, for how much sunlight falls on Los Angeles as compared to Seattle. 55% more. The second question, it would require a solar collector twice as large in Seattle to provide half the energy required to heat water. As far as the windmills are concerned, according to a research study by Boeing entitled "Twenty Five Hundred Kilowatt Wind Turbine", each would be 300 feet high, taking up more than half a square mile. The Portland area requires approximately 1,000,000 kilowatts of power, so with each windmill supplying 2,500 kilowatts, that means we would need some 400 windmills taking up 256 square miles.

I thought you'd like to see how that compares with Portland itself. There we are.

Steve Allen - Now, question 16. There are 2 nuclear plants in operation; Trojan located Northwest of Portland and the "N" reactor near Hanford, near Richland in Southeast Washington. The two plants, the answer the the final question, supply 9% of all the electricity for the Northwest.

And there you have it. The supply dilemma, hydro-electricity, our main stay, is being utilized just about to the hilt. Nuclear energy, shaken because of the accident in Pennsylvania and continuing concern over costs and very importantly, disposal of nuclear wastes. Solar energy, great potential, but currently used to a limited extent. Windmills, there's a serious question as to cost and where the acreage would come from. The dilemma in simplest terms is one of environment, supply, and cost. Another alternative source is coal.

Dick McCarthy
Centralia Mine
Manager

- Where I'm standing in this grain field two years ago was part of a mining operation. The initial phases of mining are somewhat unsightly. But we know that we can reclaim the land through useful purposes. The complete reclamation of the land after mining can cost several thousands of dollars per acre and that plant over there has spent over 51 million dollars on pollution control equipment.

Steve Allen - Energy is an expensive proposition. That's our next plateau in Electric Energy Test, the economics of energy.

The amount that we spend on gas and electricity has not always been a bone of contention. But, today the consumer sees an ever climbing cost regardless of how much he conserves. And the utility companies themselves see a no-win situation in that inflation and growth have caused their costs to shoot up as well.

As you well know, electrical costs have fluctuated. In the early days of electric service, unit costs were high, as much as 15¢ per kilowatt hour in 1911 and unit costs steadily dropped. The low point was 1950 when one kilowatt hour of electricity cost less than a penny, due to plentiful supplies of low cost electricity from the numerous hydroelectric plants. In the late 60's however, costs starting going up. Why? Well, because water power could not supply all the electricity the region required. And to meet that need, utilities starting to build expensive coal and nuclear plants. Electric Energy Test now helps you take on the least popular aspect of the energy subject-cost. Here's question 18.

Question 18: What part of the country has the lowest rates for buying electricity?

- a. Northeast
- b. Southeast
- c. Northwest
- d. Southwest

Steve Allen - Let's get an idea of what your bill actually comes to.

Assume you're a factory worker in Oregon with an average hourly wage of \$7.23. It might help you to know that the average residential usage is slightly more than 1,000 kilowatt hours per month. Question 19.

Question 19: How many hours a month do you have to work to pay that bill?

- a. 30 hours
- b. 15 hours
- c. 4 hours

Now let's go down to North Bend near Coos Bay, Oregon and ask shoppers what they consider to be the best value among telephone, electricity, food, automobiles, clothing and gasoline.

MOS #1: Pretty hard to say because none of them are down to the price that they should be.

MOS #2: Food.

MOS #3: I would say food.

MOS #4: The only one I could figure out would be a telephone.

MOS #5: Probably clothing.

MOS #6: I guess probably electricity.

MOS #7: I don't know.

MOS #8: Electricity, of course.

MOS #9: I'd say food, myself.

MOS #10: I would say food and clothing

MOS #11: Probably gasoline.

MOS #12: You certainly don't get the value out of your food, automobiles either, clothing, gasoline, no.

MOS #13: Food, you got to eat.

MOS #14: The telephone, because well you can call places and find out where things are happening around, you know.

MOS #15: I'd say electricity is what we depend on mostly.

MOS #16: None of them. I hate to pay all of them.

Steve Allen - Now let's get back to our questions, the Northwest has the cheapest rates in the country. It takes less than four hours a month to pay a typical monthly electric bill. Utility rates are controversial. Some feel present rate structures are upside down, others disagree.

Kate McKeon -

Oregon Fair Share - Fair Share is sponsoring some legislation right now which would change the rate structure. The present rate structure is set up in such a way that the more energy you use, the less you pay. And what we're asking is that the small users be the ones that pay the least, so that the less energy you use, the less you pay. It's interesting that the utilities have opposed this consistently, which indicates to us that the utilities don't have a strong interest in conservation, that despite their media campaigns encouraging people to conserve, people who do try to conserve simply see their rates go up and they have a spectacle before them of the large users getting by with very cheap

Kate McKeon -
Oregon Fair Share - rates while they take it in the neck over and over
again.

John Lobbell -
Oregon Public
Utility Commissioner - Well, it's clear that the cost of electrical energy
like the cost of most products to the consumer are
going to continue to go up and the real issues are
whose going to pay for the increases and I think
that there's a lot of merit to looking into inverted
rate schedules to encourage conservation.

People are turning more and more to electricity
for space and water heating. Why? Well with us is
Bill Parrett of Pacific Power & Light with his view.

Bill Parrett -
District Manager
PP&L - Well people are using more electricity today because
they think it's the best source. Oil furnaces can't
operate without oil. Gas furnaces must have gas. But,
people believe that we'll never never run out of
electricity because it's made from so many sources. It
can be made from coal, from hydro, from gas, from oil,
from wood chips and nuclear.

Steve Allen - Speaking of matters nuclear, and everybody is, let's go
to Casper, Wyoming and see if people know what the letters
"NRC" stand for?

- MOS #1: NRC? I don't know what NRC stands for.
- MOS #2: NRC? You got me, I don't know.
- MOS #3: I don't know.
- MOS #4: Natural resource, I don't know.
- MOS #5: I don't know.
- MOS #6: Don't know.
- MOS #7: Nuclear Regulatory Commission.
- MOS #8: Nuclear Regulatory Commission.
- MOS #9: I don't know, if it was NCR, I'd say National Cash Register, but I don't know what NRC would be.
- MOS #10: Nuclear Research Corporation.
- MOS #11: If you turn that around, I could tell you.
- MOS #12: I don't know.
- MOS #13: NRC? I have no idea.
- MOS #14: By golly, I don't think I have the foggiest idea.
- MOS #15: As far as I know, it's something to do with narcotics.

Steve Allen - NRC, that's the Nuclear Regulatory Commission. The Federal agency that watchdogs our nuclear installations. Most of us never heard of the agency until March 28, 1979. Nuclear power is in trouble even before Three Mile Island reinforced safety concerns, there were serious cost problems because of delays in energy plant construction. Construction costs of five nuclear plants in Washington were originally estimated to be just over 6 and 1/2 billion dollars. Today, those same units will cost 10 and 1/2 billion dollars. That's a 61% increase. And what about those temporary shutdowns of

Steve Allen - nuclear plants. Well, the Nuclear Regulatory Commission ordered the closing of 6 nuclear plants after the accident in Pennsylvania, among them a 1,000,000 kilowatt nuclear installation near Sacramento, California, so question 20.

Question 20: What do you guess was the dollar cost for replacement power for just one month while this plant was closed?

- a. \$1,000,000.00
- b. \$5,000,000.00
- c. \$10,000,000.00

Now let's find out what people think about the question, "should we stop producing nuclear energy?"

MOS #1: We ought to stop producing nuclear energy.

MOS #2: I think we should go ahead and build atomic plants.

MOS #3: Well, I'm no expert on it, but I don't think the answer is to stop it, we're still going to need energy.

MOS #4: Definitely, because it's not proven safe.

MOS #5: Definitely.

MOS #6: Until we come up with an alternative source to nuclear power, then I think we'd better continue with it.

MOS #7: To start with, I think we should stop because it's dangerous.

MOS #8: Well, I'm in favor of nuclear energy myself.

MOS #9: I think they're going to need something one day, they better do something.

MOS #10: Well I don't have any definite opinions, I'll leave it up to the experts.

MOS #11: Just like the song says, "the trouble with you is the trouble with me, you got two good eyes but they still don't see."

Steve Allen - Price tag for closing down the California nuclear plant was \$10,000,000.00 for just one month. Reason, they had to buy 735,000 barrels of oil to make up the loss.

The Northwest faces another sort of costly reality involving nuclear power, Sterling Munro, Bonneville Power Administrator is concerned about the nuclear economics and time table.

Sterling Munro - Northwest utilities, public utilities, privately-owned BPA -

utilities have already spent 3.2 billion dollars on nuclear power plants in the Northwest because they believe that's the cheapest new source of electricity for consumers. If those plants were stopped now, were never completed, the social costs in addition to the cost already invested, would be many many many times what has been invested on the part of consumers to date.

John Platt - Oregon

Environmental Council - That's nonsense! 40% of the electricity that's used in the Pacific Northwest could be saved by conservation measures which cost one-sixth the cost of new electrical plants. There's plenty enough electricity to last until the year 2000, even if no other plants are built.

Cary Schaye
Energy Researcher

Private utilites like to claim that they are interested in people conserving. I think this is false and actually it's not in their own self

- interests because the more people conserve, the less need there is for new generating plants, and they basically make their money by building generating plants. The best example of the fact that new generating plants aren't needed, is that Trojan, the major power plant in the State of Oregon, was shut down for most of the winter of 1978, which was one the coldest winters in Oregon's history. Yet, PGE & PP&L found more than enough power to buy to supply Oregon with electricity. There were no brownouts.

Bob Short - PGE - Utilities encourage conservation because it is cost-effective for us and for our customers. We don't like to build new power plants. When we build them, they're very expensive, we have to pass on that cost to our customer, we'd rather not to do it. To say that we build power plants to make money is silly. We build power plants because our customers need the power. They're terribly expensive, we sell power for 2-1/2 cents, new plants cost 5 cents. We simply can't make money doing that. With respect to Trojan being down, thank goodness it was running in January and February or the lights would have been out.

Vic Atiyeh
Governor

of Oregon - But the reality is that Oregon is growing and as we grow we are going to need power. More power, higher costs for plants, higher cost to us as consumers. But there is a good answer; and that's conservation.

Steve Allen - And if we don't conserve the rates will go up even faster. In the past few years there certainly has been enough publicity about saving electricity.

Advertisement - "There's a home energy analysis too, with ideas that save even more. And now a full home weatherization program. Energy saving ideas" . . .

Steve Allen - But how effective do you think these campaigns have been. Is anybody listening? That's what this particular part of the Electric Energy Test is all about. A test of your knowledge on energy conservation.

Question 21: What would your estimate be as to how much the average Pacific Power residential customer actually cut back in electricity use during the past year?

- a. 1%
- b. 10%
- c. 20%

And while you're working on your score cards here and at home, let's go to River Front Park near the roaring Spokane River in Spokane, Washington and ask the people "do you actually believe there is an electricity shortage?"

Amory Lovins - design electric household appliances so they use only a quarter as much as now to do the same jobs. We don't need to light office buildings at headache level. We can make aluminum a lot more efficiently than we do. If you add up all these kind of simple, technical changes that save us money, that we can live just the same as now using only a third as much electricity as now. If we did that, we wouldn't need any steam power plants in this country, coal or nuclear.

Herb Lundy
Director -
National
Wildlife
Federation

- Well I agree generally that what Mr. Lovins is saying. But it can't be done overnight. We, in this area, have been trying for 30 years to get electrical substitutes for hydro power. And right now my concern is that the energy crunch is putting increasing pressure on our streams for other electric dams. And this I'm sure might spell the end to our salmon and steelhead resources in the Columbia Basin if not on the Oregon Coast.

Steve Allen - Both Lundy and Lovins make strong points. But what can the average person do to solve the problem. Conservation. But getting the average person to conserve isn't easy. So it might help to basic understanding of what gobbles up the most energy and what can be done about it.

Question 22: Here's a specific list of electric appliance items, which is the greatest user of electricity?

- a. Electric clothes dryer
- b. Electric range
- c. Refrigerator
- d. Television

Question 23: Is on space heating. Which of the following represents the greatest heat loss and should get insulation priority?

- a. Walls
- b. Floors
- c. Ceilings
- d. Windows

While you're checking that out, let's find out now what the people in Yreka, California are doing to conserve electricity.

- MOS #1: When the house gets cold instead of turning up the heat, you just put on a sweater instead.
- MOS #2: I'm going without an air conditioner when I need it.
- MOS #3: I try to, on my washing, do only so many loads at one time.
- MOS #4: One of the reasons I don't need more electricity is because I'm going to build a solar heating unit for the house.
- MOS #5: Turning off the lights is one thing.
- MOS #6: Because I work, all of the appliances are turned off during the day.
- MOS #7: Just burning my wood stove.
- MOS #8: I burn wood instead of using my electric heater.
- MOS #9: We insulated the water heater.

- MOS #1: Oh yes, there's definitely a shortage of electricity.
- MOS #2: Yes, I believe there probably is. There's more people using it every day.
- MOS #3: I don't think there's a shortage of electricity here in this area because of the hydro-electric.
- MOS #4: We've never experienced a shortage of electricity.
- MOS #5: Here in the wintertime, there probably will be.
- MOS #6: I believe it.
- MOS #7: Sure.
- MOS #8: I think people should conserve, or there would be shortage, but don't think there is right now.
- MOS #9: Yes, I believe there is a shortage of electricity.
- MOS #10: We've become gluttons and we just use far too much.
- MOS #11: Electricity? Not in this area.
- MOS #12: I think, yes, indeed. We're going to see a shortage.
- MOS #13: No, because they keep giving it away, they keep sending it elsewhere from here.

Steve Allen - Pacific Power & Light's residential customers last year used an average of 12,600 kilowatt hours, that's down 1% for utility. In other parts of this region, the average homeowner is using about the same or slightly more. Despite the statistics on power shortages there are those who believe there is no real energy crisis. Others however, see disaster if we don't act right away.

Norma Jean Germond
Oregon League of
Women Voters

- The League of Women Voters of the United States after having studied energy and arrived at a position, agreed that conservation is our top priority between now and the year 2000. We believe this nation must reduce its growth rate of the use of energy. Conservation is our top priority, the development of renewable resources is our second priority such as solar heating and cooling, individual, small, de-centralized methods of energy conservation are crucial. Bio-conversion, wind and the environmentally sound use of coal. Between now and after the year 2000, we believe we must be in a path of renewable resource use.

Amory Lovins - With electricity, we're in the position of somebody that somebody that can't fill up the bathtub because the water keeps running out and people try to sell us a bigger water heater when what we really need is a plug. For example, over one-third of the electricity in this country is already used for low temperature heating and cooling, like heating buildings, and that's an awful waste like cutting butter with a chain saw. We ought to do those jobs with good architecture. We know how to build cheap and attractive buildings in any climate that don't energy to heat them. If we size and couple our industrial electric motors properly, we can double their efficiency. We know how to

MOS #10: We had the electric company come in and do a test on our house.

MOS #11: I always conserve electricity.

MOS #12: I take a colder shower.

Steve Allen - None of the items we listed are tremendous users of electricity, but those kilowatts do add up. Of those, the top user is the electric range, followed by the refrigerator and clothes dryer and then television last. As to insulation, priority should go to the ceiling. As you know, heat rises, so potentially that's the area of greatest loss. Next our floors followed by walls and last which may surprise you, windows. But just to make sure we're not missing anything on the subject of conservation we've asked an expert to share some hints. Consumer expert, Mr. David Horowitz:

David Horowitz - Energy conservation takes one very important ingredient (NBC Consumer Expert) and that's your commitment. You have to want to do it.

Yeah, there are simple things that you can do like not use your dishwasher or dryer or your washing machine until it has a full load. You can cut down on the ornamental lighting, you can use the light bulbs that have less wattage, but the biggest energy user in your home is your heating and air conditioning system. And what we're trying to do is to cut down on power usage and the key way to do that is to make sure that you don't lose power in your house. That means, insulation. Many utility

David Horowitz - companies are offering homeowners interest-free, pay later loans to weatherize homes. Look into it. On the basis of just over 1,250 homes already weatherized in one area of the Northwest, the estimate of annual savings is 6,000,000 kilowatt hours. That's 5,000 kilowatt hours per house and the greater potential exists also, not only for the homeowner, but for commercial and industrial customers also. But again, the key to making sure that everybody has enough power and electricity in the future, is your commitment to save energy now.

Steve Allen - With the Electric Energy Test we've presented you with a series of perplexing questions. Will growth continue? Can conservation do the job? Where will our future supplies of electricity come from? What will we have to pay? How much will we have to adjust our lifestyles? Who will make the energy decisions. A person who has become deeply involved with all of these problems ties it up. Lloyd Marbett, of F-L-O-B.

Lloyd Marbett - My own personal involvement has been that it's taken me ten (Fore-Laws-On-Board) years to get to a position in which I can now understand how complicated a lot of these decisions are going to be. I do think that we don't suffer as much from choosing energy alternatives as we do suffer from an overall perspective from which to develop energy strategies and I do think that's possible.

Steve Allen - The answers are not clear or easy to define. But one thing is sure, we all must make some tough choices in the months and years ahead. Choices that may very well direct the course that future generations will follow for years to come. Let's all of us get on with it and make those decisions.

I'll be right back after this message.

This has been the Electric Energy Test, thank you for being with us.

B

Solid-fuel alternatives

— besides wood, what else can you burn in your wood stove?

Compressed-wood logs and pellets, lignite briquettes, and coal could replace costly firewood

By JASON SCHNEIDER
PHOTO BY ORLANDO GUERRA

With wood-burning stoves now replacing swimming pools as suburban status symbols, the time has come to look at some of the alternatives in solid-fuel heating. For despite its many advantages, wood is not without its drawbacks as a fuel.

Besides its inconvenience compared with oil and natural gas, the price of firewood has increased dramatically in recent years. Prices for cords of seasoned hardwood from dealers now typically range from \$75 to \$150. And as more wood burners have joined the ranks, demand has outstripped supply in some areas.

State and privately owned forest lands might provide some relief, but, since wood is a low-density energy source, it seldom makes sense to transport it over great distances.

In short, while wood remains a viable heating fuel for many Americans, the rest of us should consider some of the alternatives. Granted, the fuels I'll talk about cost more money—more money than fueling and servicing a chain saw and gassing up the pickup. But at least they're available. And several of them promise to be available at reasonable cost in the future as the oil crunch and the wood squeeze continue.

Specifically, solid-fuel alternatives range from new waste-wood products, including compressed-wood logs and the somewhat exotic Woodex and Coalex pellets, all the way down to the coal we thought we'd never heat

homes with again—and to coal/wood combinations. While few of these fuels (except coal) can presently compete with firewood on a dollars-per-Btu basis, all offer convenience advantages and are suitable as an emergency fuel for wood-stove owners. And all of them can be burned in most existing wood or coal/wood stoves. (If you're only now considering the purchase of a wood stove, don't despair: Consider a unit that will burn both wood and coal. A buyer's guide follows this article.)

Woodex and Coalex

Woodex is the trademark for a pelletized fuel created from "fibrous organic material" that has been compressed at high pressure (about 18,000 lbs/sq. in.) and relatively high temperature (400–500 degrees F). Individual pellets (see photo) are ¼ in. dia., about ¾ in. long, and can be produced from virtually any organic vegetable material rich in cellulose: Wood chips, sawdust, bagasse (sugarcane residue), and corn husks are a few examples. Woodex pellets have even been successfully made from organic garbage. A pound of Woodex yields approximately 9000 Btu—about halfway between seasoned hardwood at 6800 Btu per pound (net) and high-grade anthracite at around 14,000 Btu per pound. And significant quantities can be manufactured by using only a fraction of the estimated 150 billion tons of fibrous waste generated worldwide each year. It is hardly surprising that its creator, Bio-Solar Research & Development Corp., claims that Woodex could go a long way toward replacing fossil fuels as energy.

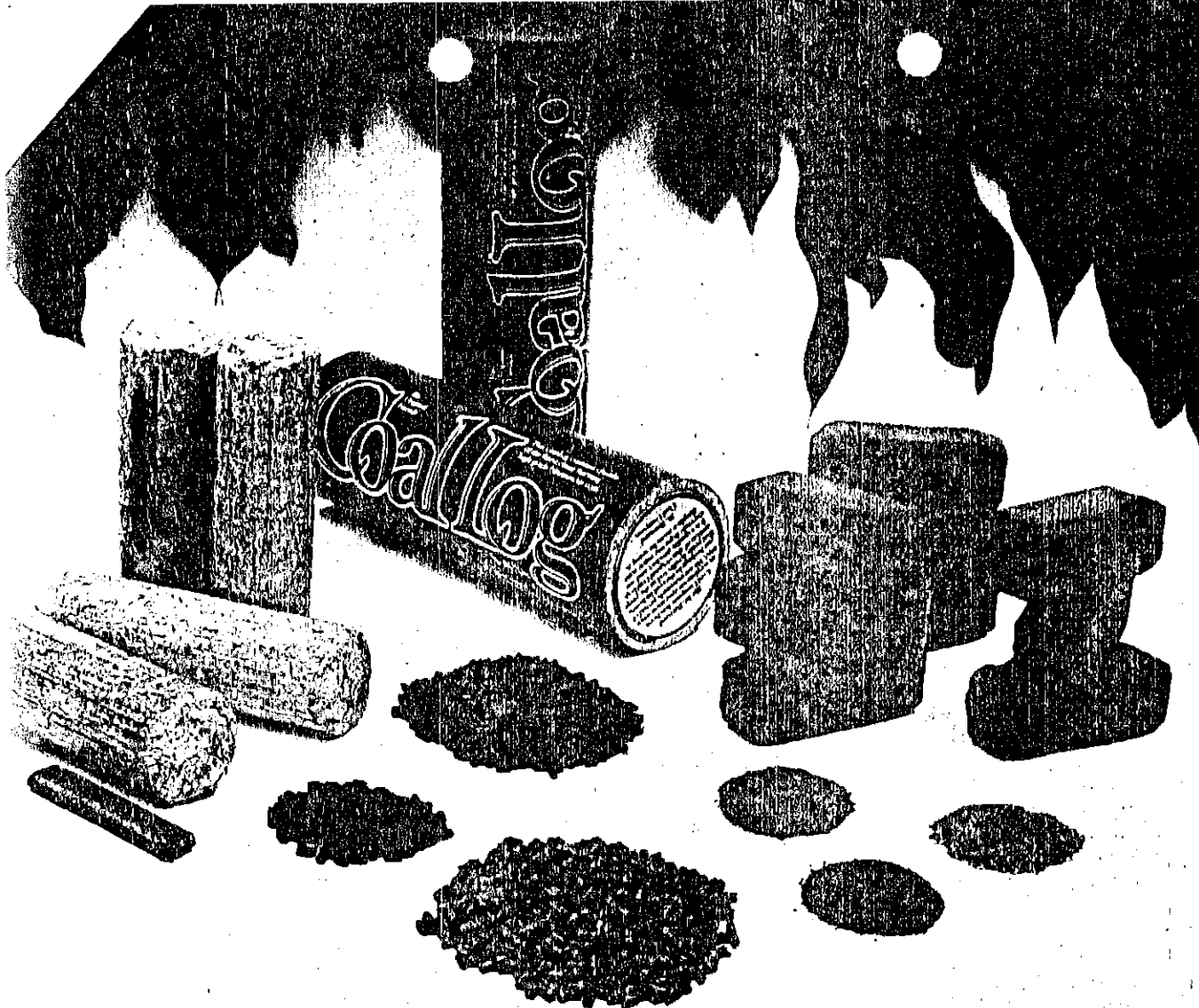
In the actual manufacture of Woodex, fibrous organic material is first pulverized to about the consistency of

face powder, moisture is reduced to approximately 12 percent (this can be varied to suit the burning condition), and the dried particulates are forced through a standard pelletizing mill. This patented process, combining high pressure, relatively high temperature, and the presence of moisture, "shifts the molecular structure of the biomass, making all the natural carbon more available for combustion," according to Bio-Solar chemists.

The wood-based pellets I examined are dark brown and smooth and shiny on the outside because, according to Bio-Solar, "the waxes and lignites have been driven to the outside of the pellet and the cellulose in the wood partially broken down so that heat energy can be released more readily." Other advantages of this manufactured fuel include low particulate emissions, very low or no sulfur content, low ash (approximately three percent) which, like wood ash, can be used as a soil conditioner, and suitability for use in existing industrial furnaces and boilers.

But can Woodex be burned in residential stoves and central heating systems? Yes, but with some important qualifications. First, since Woodex pellets burn at around 1500–1800 degrees F, it can only be burned in stoves with insulated linings (such as firebricks) or well-made "airtight" cast-iron units. And while Woodex can be used alone, the results of my tests suggest that it is easier to maintain a steady heat output if Woodex is burned together with wood or coal—particularly when it's used in a manually controlled "airtight" stove.

Crushed newspaper or kindling can be used for ignition, and once Woodex is burning it will continue to burn until the fuel is consumed. Since the pellets are quite small, a grate adapter



Fuel for thought: Coallog compressed-wood cylinder holds seven lbs. of bituminous coal. Each log contains 90,000 Btu, costs \$2.49. Ucofo Fire-Bricks are compressed lignite; 16-brick package delivers 164,000 Btu, costs \$3.50. Woodex (light-color pellets in foreground) is compressed organic waste such as Douglas fir

(light-color pile at right). It contains 9000 Btu/lb., costs \$40-\$50 a ton. Coalex (two piles of dark pellets) combines pulverized coal (dark piles) and wood waste, contains 10,000-12,000 Btu/lb. Compressed-wood Aglo Firelogs give 8500 Btu/lb. A 12-lb. package with starter stick costs \$1.50-\$3.50.

(or finer grate) is necessary when burning Woodex in a wood/coal or coal stove. Otherwise, the burning pellets will drop through the grate and burn in the ash pit or ash drawer.

With a projected at-plant price of \$40 to \$50 per ton, it appears that, in terms of economics and pollution, Woodex has a bright and glowing future. However, it is doubtful that it will attain its full potential as a home-heating fuel until units specifically designed to burn it are readily available and/or it is marketed in larger sizes for more convenient loading.

Add pulverized coal to pulverized biomass such as wood waste, mix it together and process it in the same manner as Woodex, and what have you got? Coalex. This fuel contains 10,000 to 12,000 Btu per pound, but what about pollution? According to

preliminary tests conducted by Bio-Solar, this mixture burns with the same low particulate emissions as Woodex, and sulfur contained in the coal component tends to remain in the ash rather than being released up the chimney. According to Bio-Solar, Coalex emissions are well within EPA guidelines. But it's still in the development stage, says Bio-Solar, and is not yet commercially available.

Compressed-wood logs

As the name suggests, these are produced by compressing or "densifying" under high pressure wood waste such as logged wood, wood chips, or (less commonly) coarse sawdust. Such cylindrical logs differ markedly from what are known in the trade as "cosmetic" fireplace logs in which fine sawdust and waste paper are molded

into a loglike form by adding combustible binders such as waxes and various chemicals such as copper sulfate to provide colorful flames. While cosmetic logs may burn for a few hours at a time and often produce a satisfying visual display, they must never be burned in closed stoves of any kind (makers' directions are universally specific on this point). So they cannot be regarded as a serious source of heat, despite their often high heat value (15,000 Btu per pound).

The original compressed-wood log on the U.S. market was the Prestolog, produced in the U.S. since the '20's by several manufacturers. A more recent development in compressed-wood logs that is also intended as an economically viable heating fuel is the Aglo Firelog manufactured by Agnew En-

Continued

Coals with one-half percent of sulfur or less

State	Bed or field	Sulfur content (%)	Ash content (%)	Btu/lb.
Colorado	Keystone	0.3-0.4	5.4-9.2	13,120
Montana	Canyon	0.3	4.8	9,088
Oklahoma	Croweburg	0.4	4.7	12,556
Utah	Soldier Canyon	0.5	7.5	13,158
Washington	Springbrook	0.4	5.8	11,060
Wyoming	Dietz #3	0.5	4.4	9,710

vironmental Products, Inc. (see photo). These 10-in.-long, three-in.-diameter logs come in four-log, 12-lb. packages along with a six-in.-long wax-impregnated "starter stick." Using Douglas fir as the base, Firelogs produce about 8500 Btu per pound.

I can confirm the manufacturer's assertions that Aglo Firelogs burn with little or no visible smoke, kindle easily in the normal manner when the starter stick is used, are capable of long (eight to 12 hour) burns in a variety of conventional wood stoves when two or more logs are used, and leave a very low amount of ash residue. Retail prices of Aglo Firelogs vary greatly around the country: \$1.50 to \$3.50 for a four-log package.

Coal

Low-sulfur anthracite coal is, in many ways, a more convenient fuel than wood, and, if burned properly in the appropriate appliance, it compares quite favorably with oil in economic terms and in terms of pollution, too.

The ideal stove or furnace coal should be of a uniform size recommended by the heater manufacturer; it should have an ash content of 10 percent or less; and it should have a high ash-fusion temperature (preferably above 2500 degrees F) to prevent clinkers (fused ash or metallic slag)

How fuels compare

Use this chart to compare the heat content of various fuels. Check fuel prices in your area for cost comparison. Each quantity shown contains 140,000 Btu.

No. 2 heating oil	1 gal.
Natural gas	140 cu. ft.
LP gas	1.5 gal.
Electricity	41 kWh
Coalx	11.6-14 lbs.
Anthracite coal	12.7 lbs.
Woodex	15.5 lbs.
Lignite briquettes	15.5 lbs.
Compressed fuel logs	16.4 lbs.
Seasoned hardwood (20% moisture)	24.1 lbs.

from forming too readily at high heat-output settings, thus blocking the grate. The greatest advantage of anthracite coal over wood is that it is a much more compact energy source, yielding almost twice as many Btu per pound as seasoned hardwood (see table below).

The oldest and most common form of packaged coal product is bagged anthracite or bituminous coal. It's offered in 50- and 100-lb. reinforced-plastic or canvas bags at hardware stores. The primary advantages of bagged coal are that it's easy to carry and convenient to store. But these conveniences don't come cheaply: Bagged coal generally costs between \$4 and \$5 per 50-lb. bag, or \$160 to \$200 per ton.

Another variation on the packaged-coal theme is the CoalLog, a 17-in.-long, 5½-in.-dia. cylinder (see photo) made of compressed-wood chips and containing seven pounds of high grade, low-sulfur (one percent), bituminous coal. Each log contains approximately 90,000 Btu of potential heat energy, and is designed to burn three to five hours in an open fireplace.

I tried burning a few CoalLogs in a cast-iron wood/coal stove with a cast-iron shaker grate and updraft combustion pattern. Under these conditions, the logs ignited easily and burned for six to seven hours, delivering a steady heat output. My sole reservation is that during the first half hour after ignition I could smell a moderately strong coal odor outdoors. Since bituminous coals have a higher volatile (combustible gas) content than the anthracites, I recommend burning them only in stoves or heaters with efficient, well-articulated secondary combustion systems. With a suggested retail price of \$2.49 each, CoalLogs are considerably more expensive than bagged or bulk coal.

Lignite briquettes

Lignite is sub-bituminous coal yielding about 8000 Btu of heat en-

ergy per pound. Ucofo Fire-Bricks (see photo) are brown lignite dried and compressed into brick form, which increases their Btu-per-pound content to about 9000. Individual 18-oz. bricks measure about six in. long, 2¼ in. deep, and 1½ in. high. These West German-made bricks are available in packages of 16 bricks (18¼ lbs.) and 44 bricks (55 lbs.) for "household convenience and easy storage."

Perhaps the most significant advantage of this particular type of lignite briquette is its extremely low sulfur content—0.12 percent, according to Pasvalco, the U.S. importer. This would place it well below domestic anthracite and bituminous coals in what is regarded as the most ecologically damaging of chemical pollutants. In addition, lignite briquettes are definitely less dirty and dusty to handle than coal; clinkers and slag are virtually nonexistent; and ash is minimal—about five percent by weight. One of the few negative points of these European fuel bricks is their relatively high cost: \$3.50 for 16 bricks and \$9 for 44.

Although lignite briquettes were originally designed as a low-pollution "smokeless fuel" for coal stoves, they can also be burned readily in most grateless wood stoves, provided they're placed atop a reasonably lively bed of coals. And unlike coal, which often gives off a slight to moderate odor when an area heater is freshly stoked, lignite briquettes are virtually odorless.

Coalwood bricks

Coalwood "fireplace and stove fuel" is a combination of ¼-in. by ¾-in. hardwood chips and low-sulfur bituminous coal chunks of approximately the same size. The chips and chunks are held together by an "organic resin" binder and cold-molded directly into a four-brick box. Each three-by-three-by-six-inch brick contains about 25,600 Btu, and the four-packs will sell for about \$1 each, according to National Coalwood Products Co. Since the coal component contains only about 0.6 percent sulfur (well under EPA limits), pollution should be minimal. The shiny black bricks are clean to the touch and provide a good "flame effect"—important to owners of stoves with fire-viewing windows. The manufacturer says that the bricks will be offered in larger "economy packs" in the future. [E]

FOR MORE INFORMATION

Aglo Firelogs: Agnew Environmental Products, Inc., Box 1168, Grants Pass OR 97526. CoalLog: St. Bernard Coal Co., Louisville KY 40204. Coalwood: National Coalwood Products Co., 2170 Alum Creek Dr., Columbus OH 43213. Ucofo Fire-Bricks: Pasvalco, 400 Demarest Ave., Closter NJ 07624. Woodex and Coalx: Bio-Solar Research and Development Corp., 1500 Valley River Dr., Eugene OR 97401.

Daily Journal of Commerce

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PORTLAND, OREGON, 97210, FRIDAY, JANUARY 18, 1980

Daily Journal of Commerce USPS 143-560

PRICE FIFTY CENTS

RATE REPERCUSSIONS

Big watt consumers shocked by price hike

By MARILYN E. FORBES
Associate Editor

Local heavy industrial electricity consumers are staggering this week in the wake of Portland General Electric's 17.8 percent rate increase.

Making matters even worse, two more increases in power rates are right around the corner!

A jump of about 7 percent is expected July 1 to offset 88 percent higher wholesale costs from the Bonneville Power Administration. Still another increase is due in August when the coal-fired Boardman plant comes on line.

PGE spokesman Dave Eagon says he doesn't know what the hike will amount to, but industrial users are preparing for the worst — about 20 percent.

Businesses reel

Planning is paramount in business and this substantial increase has set many firms off balance.

Carol Eckert, regional communications manager for Crown Zellerbach, says the increase delivered a cruel blow to CZ's West Linn pulp and paper mill.

"That's a very big jump and increases our cost of doing business tremendously," she charges.

"We're breaking our backs to try to control inflation by cooperating on price increases. But when our costs get out of control it makes it a tough job," she concedes.

Hefty bill

CZ figures anticipate the higher power bill will end up costing the company more than \$800,000 per year. It currently spends nearly \$5 million per year on PGE electricity.

Earl Meyer, general manager of Forest Fiber Products Co. in Forest Grove, admits the increase will have a "very dire effect on our operations."

"We're all feeling very angry and upset. For now, we'll have to absorb the additional costs until we can think about passing it down to the consumer in three to four months," he tells The Daily Journal of Commerce.

Bigger problem

Compounding Forest Fiber's problems is a depressed forest products market, severely hampered by high interest rates for housing.

An exasperated Meyer adds that he hasn't even started to "worry about the next ones" (price increases).

PGE spokesmen say it's too early to assess

the impact of the increase on consumer prices.

Oregon Public Utility Commissioner John Lobdell has asked the utility to chart the affects on industrial users and others. Lobdell ordered the report to be filed in 45 days.

At Publishers Paper in Oregon City, presidential assistant Pete Schnell says the company executives are "talking hard and fast about more independent electricity generation."

"We're constantly looking at new ways to generate our own power," says Schnell. There are two 5 megawatt turbine generators in operation at Publishers plants in Newberg and Tillamook. Another is under construction at Newberg.

Greatest cost

The cost of energy is the largest bill faced by the paper manufacturer. Labor used to be the biggest budget item, but was elbowed down last year.

"Energy is escalating faster than anything we have to deal with," Schnell says.

He adds that the total bill is "eight times what it was in the mid-70's."

"We have to go back and plan our budgets again and take into account these tremendous price increases," he reports.

Cost-cutting independent generation with wood wastes will act as a salvation for the big energy user, he says.

Sam Donaldson of Boise Cascade notes that his firm is also looking at independent generation.

"As the price continues to rise, the investment value of generating plants become more attractive," he says.

His wish

Reichold Chemicals' St. Helens Plant Manager Ed Stipkala says he wishes the increase hadn't happened.

"We have to be competitive in the chemical marketplace and this is making it very difficult," he snaps.

"It's very difficult to pass costs through, we just can't keep absorbing it," Stipkala adds.

The chemical boss says his firm tried to support the restart of the Trojan nuclear power and gas-fired Harborton plants because "power is essential for us to stay in business."

CZ's Eckert sums-up the feelings of big industrial users when she says the firm is staying on top of its conservation program, looking at its own generating facilities and "wringing our hands over the next increase."

TO
THE
WALL

ADLE Editor

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Moms, Dads to fight inflation

...topping \$23 million, for a section of a 500,000-volt power transmission line between southern Oregon and Idaho.

Commonwealth Electric Co. of Lincoln, Nebr., received the \$23,377,000 contract for building the 182-mile section of line from Burns southwestward to Malin substation. Malin is a major electrical substation southeast of Klamath Falls.

Bob Moench, PP&L senior vice president, said construction of the Burns-Malin segment follows virtual completion of the first 90-mile section of line across southern Oregon between Medford and Malin.

Another contractor, Interstate

Tower work begins

In the Burns area, Commonwealth crews soon will begin work on tower foundations, followed by assembly of the steel towers.

Tower sections will be bolted into place on the ground and hoisted into position by a large truck-mounted crane. Tower steel and other construction materials are being delivered to temporary storage yards in Burns.

From Burns, the 534-mile line will swing eastward toward Idaho, with the Midpoint substation in south-central Idaho its final destination. A contract will be awarded next spring for the remaining sections of line in Idaho

interconnections with the Burns Power Co. system at Midpoint will enable Pacific Power to deliver additional electricity from its Wyoming generating plants to customers in the Northwest.

Utility seeks to build 2nd Wyoming plant

Pacific Power & Light Co. and Black Hills Power and Light Co. announced Thursday they had filed an application with the Wyoming Department of Environmental Quality for a permit to build a second coal-fired power generating unit at the Wyodak site near Gillette, Wyoming.

Representatives of the two companies said the new plant would be a virtual duplicate of the 330,000-kilowatt Wyodak plant completed in mid-1978. The first Wyodak plant utilizes the largest air-cooled steam recovery system in the world, and the second plant also will be air-cooled.

The Wyodak plant uses about 200 gallons of water per minute, where a conventional water-cooled plant of similar size would require upwards of 3,000 gallons of water per minute.

The new plant will be jointly owned by Pacific and Black Hills and will use coal from the mine that a Black Hills subsidiary operates at Wyodak.

The companies said they decided to locate a second plant at Wyodak because the first plant is operating extremely well and much of the engineering already has been completed.

log exports take big dip

A total of 235.8 million board feet of softwood logs, was exported from all ownerships in Oregon, Washington, northern California, and Alaska in October 1979.

The October volume was down 29 percent from the September 1979 exports but up 14.7 percent from the October 1978 total, according to research economist David Darr of the U.S. Forest Service, Pacific Northwest Forest and Range Experiment Station.

Some 213.2 million board feet, or 90.4 percent of the October 1979 west coast log exports, went to Japan.

October exports from Oregon and Washington totaled 221.4 million board feet, down 29.7 percent from the September volume. October shipments from northern California totaled 4.9 million board feet, down from the September volume of 6.1 million board feet. Alaska exported a total of 9.5 million board feet in October compared with 10.9 million board feet in September.

Carter nods pipeline

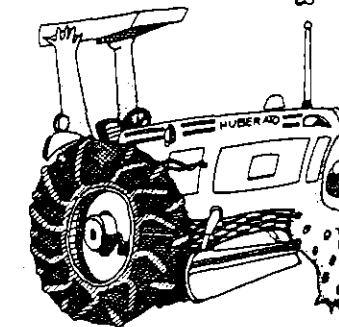
President Carter has authorized construction of the Northern Tier Pipeline from Port Angeles, Wash. to Clearbrook, Minn.

The billion dollar energy project has been in preparation for four years. It will allow west-to-east crude oil transportation for consumers in the upper Midwest and Great Lakes states. It will also give an incentive for oil exploration in Alaska.

states. He says the company claims the lowest delinquency rate in the

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Ratepayer conservation said key to energy plan

SEATTLE — Conservation investments that might not make good economic sense for an individual consumer, make a whole lot of sense for suppliers of electric power.

Speaking before the Council for Washington's Future, Bonneville Power Administrator Sterling Munro warned that if the region does not act fast on conservation, there may be no choice left but curtailment. And curtailment, he says, could mean job layoffs and brownouts.

Munro observed that a homeowner who pays only one or two cents per kilowatt hour for electricity may not want to invest three or four cents per kilowatt hour of savings.

But he said that when the least

expensive new source of power that a supplier can build now won't produce power for less than four or five cents per kw — or more — the supplier can invest anywhere up to that amount in conservation and come out ahead. In that case, he said, supplier and ratepayer both benefit.

Munro says the regional power bill pending before Congress would give BPA the necessary authorization to invest large sums in cost-effective conservation. He said cost-effective conservation means investments that save a kw for less money than it would cost to produce one in a new power plant.

"The '80s are here! And so are the shortages we've been predicting for the '80s," he said.

11

be guaranteed by the National Credit Union Share Insurance Fund.

"I want to get my money into another bank," said Bobbie Johns, one of those waiting in the long line this morning. "I think it's a panic sort of thing. They said we'd get our money out 100 percent, but it makes me wonder if any credit unions are reliable."

Vicki Oviatt shared Ms. Johns' concerns. "This chills me toward dealing with credit unions," she said. "I suspected something was wrong in October when they told me interest payments would only be made every six months."

Emile Cloutier, 25th in the line, disagreed with Ms. Oviatt's assessment.

"I've dealt with credit unions for 20 years and I've never had any problems before," he

"I played cards with a board member last Thursday night," said Larry Katz. "He didn't hint anything was wrong. This is the pits, I feel I've really been duped."

Lewis Wright, president of the credit union's board of directors, was trying to explain the failure this morning.

He said the decision to liquidate wasn't made until Saturday. He said the credit union first learned about a year ago that it was facing financing difficulties, but he added that the early problems were solvable.

"Our big problem was that we were growing so fast and that we tied a lot of our capital into computer equipment," he said. "Our management wasn't being frank with the board. They had defrayed a lot of expenses which weren't explained to us."

another, but those efforts failed.

Federal credit union officials flew to Medford Saturday to talk with the local board about liquidation. Five federal officials are overseeing the credit union's closure this week.

By 10 a.m. today those who were in line before the credit union's doors opened had received checks for their deposits. No interest has been paid on the deposits since July.

Outside about 30 more people were waiting for their turn to enter the building.

Wright had a difficult time fighting back his emotions.

"It's a damned shame this had to happen," he said. "But it would have been a worse shame if we'd never started up and never put \$4 million out into the community."

Long was asked if the conferees would split the \$100 billion difference between the two bills. "The whole thing is negotiable, both on the upside and the down side," Long replied.

The Senate bill would take in about 38 percent of the net windfall oil companies will make from rising world oil prices and Carter's decision to decontrol domestic oil prices. The House bill would take about 61 percent. The administration estimates the total profit at about \$1 trillion.

"I was glad it passed," Carter said after the Senate Monday night approved, 74-24; its version of the bill highlighting the program.

MEDFORD MAIL TRIBUNE December 18, 1979

Power outlook grim, local PP&L man says

By ALLEN HALLMARK
Mail Tribune Staff Writer

If Bill Parrett had just one word to describe the power supply picture in the Pacific Northwest this winter, it would be "grim."

The Pacific Power & Light Co. Medford district manager warned a Greater Medford Chamber of Commerce forum audience Monday that mandatory electric use curtailments may become necessary if the picture doesn't improve.

Related story Page 3A

Parrett listed several reasons for the current shortage in the regional power pool.

— Oct. 12 the Trojan nuclear power plant was shut down for repairs. It has not yet been allowed to reopen by the Nuclear Regulatory Commission.

— Two coal-fired generating units at PP&L's Centralia, Wash., plant also were down for repairs for a few weeks this fall.

— Rain and snow east of the Cascades needed to recharge the power-generating water in the regions' large reservoirs have been far below normal this fall.

Parrett said power officials decided to draw down reservoirs to generate more hydro power to make up for the shutdown at Trojan and Centralia.

As a result, storage behind the main hydro-

power producing dams is 10 percent below the 40-year low water point, Parrett said.

Portland General Electric, which serves the Portland area, is in a worse situation than PP&L because it depends more on hydro than PP&L. PGE now is in Stage 2 of voluntary curtailment and is required by the state to advertise asking its customers to conserve electric energy in every way possible.

Parrett said today that PP&L normally relies upon a mix of 75 percent thermal power — mostly coal generated — and 25 percent hydro power.

He said he doesn't want to be accused of "crying wolf," but on the other hand PP&L doesn't want to be accused of not warning the public ahead of time should a real crisis occur.

"We're going to have to do everything we possibly can to conserve," he said. "Our demand at this point is beginning to exceed our ability to supply."

Parrett urged people to try to cut down the use of electricity in their homes.

"If you don't need it, don't use it, shut it off," he said. And he warned that conservation alone may not be enough.

Because Oregon is a fast growing state, power use is increasing at an annual rate of 5 percent. In the Medford district alone in 1978 some 2,000 new housing units were added. Electric use growth was continuing at a 6.65



Bill Parrett

percent pace through the end of October this year, Parrett said.

Medford now has a peak load demand of 320 megawatts compared to a 150-megawatt peak demand in 1967, he said.

He predicted that the Medford district will use a total of 1,200 megawatts in 1980. Existing powerlines can bring in about 800 megawatts. About 370 megawatts of power are generated by small dams in southern Oregon.

Parrett said PP&L now has a study in progress to determine where it might begin generating more power in southern Oregon. The company will be ready to announce more about the study and its plans next spring, he said.

If the situation worsens and Gov. Vic Atiyeh is forced to issue an executive order calling for mandatory curtailments of power, industrial and commercial consumers probably will be the first to be cut off, Parrett said.

But residential customers might also be affected. PP&L has contingency plans that call for a rotating curtailment so that each section of the district would be shut off for short periods of time on an alternating basis.

A more long-term problem is what PP&L and other power suppliers will do to prevent a projected region-wide shortfall of 2,334 megawatts in 1984, Parrett said.

More power generating plants will be needed to meet that demand and the power companies will need to have Trojan and other nuclear plants on line as much as possible, he said.

Remarks of the President on Aspects of the Energy Crisis

Coal

We anticipate a doubling in the use of coal by 1985 if all the recommendations are carried out. The basic premise for this recommendation was that we would not lower air quality standards. So I can't see us changing the basic laws that protect the quality of life of the American people.

*Editors' Briefing at the White House
7/27/79*

Conservation

The thing that impresses me most strongly is that the conservation of energy, the saving of energy, the stopping of the waste of energy, need not be an unpleasant thing. It need not be a sacrifice, it need not be something that disrupts America. It can be an exciting, positive, pleasant thing. It's not necessary for us to drive around in automobiles that weigh 5,000 pounds, one person in an automobile, going 75 miles an hour. It's not necessary to have a house in the wintertime that's up to 80 degrees temperature or one chilled down to 55 or 60 degrees in the summer, where you have to wear a sweater. These kinds of things can give us a better life, and I think that I can say accurately that as we move toward more conservation, increased use of solar power and the development of American energy resources, we will not have a lower quality of life, we can have an even better quality of life, safer, more enjoyable, and with a sense that we've done something not only for ourselves and our family, but also for our Nation, and it will be a patriotic thing.

*Interview
10/26/79*

Decontrol of Domestic Oil Prices

This is an extremely important, a vital issue. Do not be misled by political demagoguery. I and every other public official in this country have an obligation to speak the truth and to deal responsibly with the hard facts, and they are hard facts. We cannot close down all nuclear power plants, burn less coal, refuse to build oil refineries, refuse to explore for new oil sources, oppose the production of synthetic fuels, and at the same time encourage the waste of energy by artificially holding down its price in order to encourage more consumption. This is a ridiculous combination of proposals which could only be put forward in an election campaign. America knows better.

*Remarks to AFL-CIO
11/15/79*

Gasohol

On gasohol, the Congress, particularly including the Congress Members from Iowa, have proposed that we make available low-interest direct loans to farmers who will put in the very small gasohol-producing plants.

I have not announced this before publicly, but I would like to announce it to you, that my Administration will support this move and I believe that Congress this year, before it goes home, will have low-interest direct loans for people who will put in small gasohol-producing plants on farms in Iowa.

*Burlington, Iowa, Town Hall Meeting
8/22/79*

Heating Oil

We set two goals for ourselves late in the spring, when home heating oil supplies were very low, quite a bit below last year. The first commitment that I made in Portsmouth, New Hampshire, at a town hall meeting, was that in October we would have 240 million barrels of home heating oil on hand in storage ready to go to homes throughout the New England area and throughout the country by the end of October. We've already reached that goal.

Last year during a fairly severe winter, we had a total consumption, I think, of 233 million barrels. So we've got enough home heating oil on hand.

*Interview in Boston, Massachusetts
10/20/79*

Hydroelectric Power

I am also announcing today reprogramming of \$300 million of existing funds to rehabilitate 100 rural hydroelectric turbines. The Army Corps of Engineers has identified nearly 2,000 places where we can build or restore this type of hydroelectric plant. Eventually, we should be able to produce enough electricity to save almost 140 million barrels of oil each year—enough to meet the energy needs of 8.5 million people.

*Speech to Iowa State Association of Counties
5/4/79*

Inflation

Energy is the main threat and the main cause of high inflation. The oil prices raised by OPEC have caused 4 percent of our inflation rate. If it weren't for energy, if you could just set aside energy and count everything else put together, food and everything else, this past summer of 1979 the inflation rate would be no higher at all than it was in 1978 and 1977. But OPEC oil prices have increased more than 60 percent since last December. The approach to that is to have an energy policy that cuts down on oil imports. We now import half the oil we use. We also import along with that inflation and unemployment.

*Dolton, Illinois, Town Hall Meeting
10/16/79*

Nuclear Power

I think our country is possibly, probably, going to rely on nuclear power less in future years than other major nations about which I happen to know. In Japan, in Germany, in Great Britain, even oil producing countries like Iran and Saudi Arabia, they are moving much more rapidly toward nuclear power than are we. We are blessed with a broad diversity of energy sources not only solar, with the technical ability to use it, but also coal, geothermal supplies, oil, natural gas, shale deposits, and many others, hydroelectric power.

So I think there is a place for nuclear power, it ought to be safe, the American people ought to understand all the facts about it and its use can be minimized to the extent that we save energy and shift to other sources of energy.

But I don't want to mislead you. I think there will be a place for nuclear power in the future. It is my responsibility along with many others to guarantee that it is safe.

*National Public Radio Call-Out Program
10/13/79*

Oil Windfall Profits Tax

I have just signed a message to Congress asking for the passage of a windfall profits tax and the establishment of an Energy Security Trust Fund. This is one of the most important legislative proposals of my Administration. A windfall profits tax is the only thing that stands between the oil companies and a huge bonanza of unearned, unnecessary and unjustified profits. The Energy Security Trust Fund is a bridge between the America of today, dependent on foreign oil, and shot through with wasteful patterns of consumption and in the America of tomorrow in which our technology can make us far less dependent on foreign oil.

*Remarks at Signing Ceremony
4/26/79*

The price of energy—I don't want to mislead you—the price of energy is going to go up because the world is demanding more and more and the world is producing not much more or even less. We have very little control over the price of energy, and as it goes up, enormous profits are going to be realized. The question is, should those unearned profits stay in the hands of the American oil companies or should we have a windfall profits tax and let those profits be used to produce more oil and gas, yes, but also to insulate homes, to provide solar power, to have new kinds of energy, to help poor people and low- and middle-income families bear the increased cost of energy, to give us a better rapid transit system and transportation system? That's a basic question.

*Tampa, Florida, Town Hall Meeting
8/30/79*

Solar Energy

Rural America is the best place to experiment with solar energy. In my 1980 budget, I have proposed that we establish two research centers to work on applying alternative energy sources—including solar energy—to agriculture.

Already the Federal government is supporting 50 separate experiments in this area. Iowa State University is one of the leaders in this field, right now testing better ways for farmers to use solar energy to dry grain. It may even be possible to store energy during the summer to use during the winter. We plan 91 additional projects with particular emphasis on using solar energy to heat swine and poultry houses.

*Speech to Iowa State Association of Counties
5/4/79*

...we are trying to shift toward more renewable supplies of energy. Solar power is one that you mentioned and I will comment on that specifically. We set as a goal for ourselves by the end of this century to have 20 percent of the total energy used in this country coming directly from the sun. This is a truly ambitious goal, but I believe that we can meet it. In order to do that, for instance, we are setting up a solar bank that will give loans to people who will take actions to increase their own use of solar power.

*National Public Radio Call-Out Program
10/13/79*

Standby Gasoline Rationing

I will prepare for gasoline rationing. It will not be implemented. We will put the rationing plan on the shelf as a standby, but we will be ready, and if we do have a severe and sustained loss of gasoline, then it will be put into effect.

I hope that it will never have to be implemented. And if I do a good job as President, and if we get a good energy program to the Congress, that I have described to you in my opening remarks, then we won't have to have gasoline rationing. But I would rather have a standby gasoline rationing plan than to see gasoline rationed by price so that only the rich people can afford it. You have only got those two alternatives.

So I will have a standby rationing plan. It will only be implemented if we have a severe shortage that lasts a long time.

*Bardstown, Kentucky, Town Hall Meeting
7/31/79*

I asked the Congress for authority to impose rationing. The Congress gave me a bill authorizing the development of a rationing plan. It still has a triggering mechanism in it that says we have got to have a 20 percent shortage before I can implement it. That is too high a triggering figure. That needs to be reduced to about five percent at the most, and I am going to ask the Congress to give me that authority. But we are really making some progress now after a long delay.

*Interview with Frank Reynolds, ABC News
12/31/79*



ENVIRONMENTAL READINESS DOCUMENT

WOOD COMBUSTION

August 1979

U.S. Department of Energy
Assistant Secretary for Environment
Washington, D.C. 20585

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FOREWORD

Environmental Readiness Documents are prepared periodically to review and evaluate the environmental status of an energy technology during the several phases of development of that technology. Through these documents, the Office of Environment within the Department of Energy (DOE) provides an independent and objective assessment of the environmental risks and potential impacts associated with the extensive use of the technology.

This Environmental Readiness Document was prepared to assist DOE in evaluating the commercial readiness of wood combustion technology with respect to environmental issues. An effort has been made to identify potential environmental problems that may be encountered based upon current knowledge, proposed and possible new environmental regulations, and the uncertainties inherent in planned environmental research.

This document is one of several assessments of energy technologies prepared for DOE management and public review. It is being distributed so that persons having interests and responsibilities in this area can provide DOE with additional information and comments.



Ruth C. Clusen
Assistant Secretary for Environment

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SECTION I. SUMMARY STATEMENT ON ENVIRONMENTAL ACCEPTABILITY OF WOOD COMBUSTION TECHNOLOGY

Wood harvesting and wood combustion are currently carried out commercially. There is a high probability that expanded use of wood combustion can be achieved in an environmentally acceptable manner if adequate attention and effort is given to avoiding and minimizing potential environmental and socioeconomic impacts. To do so will require further examination of a number of environmental and socioeconomic concerns:

- Direct combustion of wood emits greater amounts of particulates and unburned hydrocarbons, but lesser amounts of SO₂, than coal combustion, per unit of energy. In addition, improper operation of units causes CO and unburnt hydrocarbons to be emitted in objectionable quantities. Of several modes of combustion, residential wood combustion emits the most pollution per unit of energy used and is likely to remain unregulated. The greatest uncertainties with respect to air emissions are the health effects of particulates and unburned hydrocarbons and the severity of CO emissions. Haze can also be produced by area-wide residential use of wood. Costs of reducing emission through engineering advanced residential units may be significant.
- Removal of forest residues and the practice of whole tree harvesting will diminish the amount of nutrients and organic matter returned to the soil. The magnitude of the effect of these practices on future forest growth is not well known.
- Erosion of soil from cleared areas is fairly predictable and can be serious in areas of high rainfall and hilly topography. Conscientious application of forest management and erosion control practices can control erosion. Area by area studies are needed to define conditions upon which control programs can be based.
- The large land area required per heat unit of wood fuel will in some cases cause competition with land use for agricultural, wood fiber, or recreational purposes. To accurately assess the magnitude of this concern, a region-by-region study of land availability, suitability, potential ecosystem disruption, and competing uses is required.

The applicability of these concerns depends on the wood source contemplated for expanded use as well as on the nature and magnitude of specific end uses. For example, the only significant concern over expanded use of mill and process wastes involves incremental air emissions from combustion.

Overall conclusions for the environmental acceptability of wood combustion are summarized in Table 1-1. They represent a consolidated assessment of the individual concerns and mitigation costs discussed in Section IV.

Table 1-1. Conclusions for Wood Combustion

	Probability				
	0.1 Low	-----	0.5 Med	-----	0.9 High
	Low-Med		Med-High		
The probability of determining an adverse finding in the conduct of environmental R&D		x			
The probability of technology program delays in the event of an adverse finding*		x			
The probability that energy costs will increase at least 10% in the event of adverse finding		C	R		

* Probability of technology program delays:

Low-----Assessment of environmental factors will be substantially complete prior to commercialization,
 Medium--Assessment of environmental factors will be concurrent with DOE commercialization development, or
 High----Assessment of environmental factors will not be complete until after commercialization.

Note: These conclusions are based on an assessment of the information contained in Table 4-1. The specific concerns are not of equal significance.

"R" denotes residential
 "C" denotes commercial

SECTION II. INTRODUCTION

This Environmental Readiness Document (ERD) is one of a series of such documents prepared by the Office of Environment (EV). Each ERD is an independent review of the environmental problems or uncertainties associated with a technology that is considered by the Department of Energy (DOE) to be a candidate for commercialization.

An ERD is prepared from time to time in the development cycle of an energy technology program to inform decisionmakers and the public of the current status of the technology with regard to its potential effects on the environment and on public health and safety. Because information about the technology and its possible effects is necessarily incomplete during much of the development cycle, the ERD represents the collective judgment of EV scientists at the present time. As further research results become available, and at appropriate points in the decision process, the ERD may be updated.

The document addresses the uncertainties that remain to be resolved through R&D, uncertainties that constitute a limit on the confidence that can be placed in the conclusions from the review. The conclusions are presented in a table giving the probabilities (as estimated by EV scientists) of an adverse finding resulting from further environmental research, and of a delay in the commercialization process or of increased mitigation costs if there is such an adverse finding.

The impacts and concerns discussed in this document are treated generically in most cases, that is, without reference to specific sites or locations, because these have generally not yet been determined.

Section III describes the technology and the energy resource base involved and reviews the environmental concerns associated with technology implementation.

Section IV examines the likelihood of adverse findings concerning the environmental acceptability of the technology, the problems and uncertainties stemming from current or anticipated environmental regulation, and the potential costs of environmental controls. On this basis, an assessment is offered of the existing or potential barriers to commercialization.

Appendix A presents a tabulation of environmental concerns with the research needed to resolve the concerns and its estimated costs. The research requirements do not constitute a proposed Federal R&D program; they represent the best judgment of EV scientists and engineers at this time and are presented here as a reference for research planners. Appendix B shows the relative contribution of environmental control costs to total energy costs for current environmental standards and possible new ones.

The lack of appropriate National Environmental Policy Act (NEPA) documentation can cause a significant delay in the development and commercialization cycle. However, no attempt has been made in this

presentation to identify formal NEPA requirements (the type of NEPA document required and its schedule). There is a prescription, however, that Programmatic Environmental Reviews, as appropriate, will be prepared pursuant to 10 CFR 1021, "Compliance with the National Environmental Policy Act" (Federal Register, Vol. 43, No. 35, February 21, 1978), prior to the DOE's taking action to commercialize any technology or process.

SECTION III. TECHNOLOGY PROGRAM AND MAJOR ENVIRONMENTAL CONCERNS

This section describes the technologies and processes required to utilize U.S. wood resources for the production of energy through wood and wood waste combustion and discusses objectives of technology commercialization. The environmental concerns arising from each technology are briefly discussed and are summarized in Table 4-1. They will be discussed in detail in Section IV.

A. TECHNOLOGY

Wood combustion technology (WCT) encompasses a group of technologies which together add up to an integrated system resulting in the use of wood as a direct source of fuel. The stages in this system are shown in Figure 3-1.

1. Harvesting, Transportation, and Handling

Unlike many other energy technologies, the resource base for wood combustion is very heterogeneous, and different harvesting technologies are necessary to gather the wood. The wood resources currently available in the United States for use as fuel consist of surplus growth in standing forests, logging residues, milling residues, pulp/paper process wastes, and urban wood. In the longer term, silvicultural energy farms could provide trees solely for use as a fuel. Although some of the available wood biomass would be too difficult or expensive to collect, it is unlikely that the resource base will limit the expanded use of wood-derived fuel in the near term.

Figure 3-2 shows the area of forest land in the United States by geographical region. The amount of aboveground wood currently available which is not used for pulping or lumbering, other commercial use, or is within the confines of protected forests for use as fuel, totals about 7.5 quads per year. If complete forest harvesting (aboveground and stump root system) were employed, the total increases to about 10.0 quads per year. Currently, about 1.5 quads of wood-derived fuel are burned annually to produce heat, steam, and electricity. Of this, about 1.1 quads are used in the forest products industry and 0.3 quad is used for residential space heating.



Figure 3-1. Wood Combustion Technology System

The heating values of woods of different species, on a moisture-free and resin-free basis, are about the same, at 8300 Btu per pound (Refs. 1 and 2). Resin, at 17,000 Btu per pound, has a higher heating value than the wood itself; thus, resinous species, generally softwoods, have a slightly higher heating value than hardwoods on a dry basis. The moisture content of green wood reduces its heating value considerably. The moisture content of most species ranges from 40 to 60 percent (typically 50 percent) (Refs. 1 and 2), so a typical heating value for wood on a wet basis is 4150 Btu per pound. The recoverable heat during combustion is also reduced because the vaporization of water in the fuel requires about 1000 Btu per pound of water.

Compared to coal and many heavy oils, wood has a minor sulfur content (less than 0.1 percent). This is true even when wood and coal are compared on an equivalent Btu basis (coal has a heating value of about 12,000 Btu per pound and may contain 1 to 6 percent sulfur).

There are three main systems of harvesting wood for energy: clearcutting systems, selective cutting systems, and logging residue collection. In each of these systems, whole tree harvesting or bole-only harvesting may be employed. In bole-only harvesting, delimiting and topping are done in the woods. Approximately 30 percent of the tree is left in the forest and is either not used or must be separately collected. In whole tree harvesting, the whole aboveground portion of the tree is utilized. A third process, not currently in use, is complete tree harvesting, in which the stump and roots are removed and processed along with the aboveground parts. Figure 3-3 shows the equipment used at each stage.

Wood has many attractive features as a fuel, including relatively low sulfur emissions and renewability. However, when compared to other fossil fuels, wood is more difficult to handle, transport, and meter because it is less dense and contains more moisture. Wood may be handled as loose logs, for example, in cord wood for residential sales. Recently, baling of cordwood has been tested in an attempt to mechanize its handling. For industrial use, the wood is usually chipped or hogged (comminuted in a hammer mill), which makes it easier to transport and handle at the plant site. Wood densification by pelleting or extruding is an old technology which is gaining increased attention. The objective is to decrease the water content (10 to 12 percent by weight) and the volume (30 to 60 pounds per cubic foot) and increase the energy density (8000 Btu per pound).

2. Combustion and Disposal

In 1970, wood accounted for about 1 percent of all energy used in the United States (Ref. 3). The steady increase in wood use for residential heating is no doubt caused by the rising cost of fossil fuels and nuclear energy. Wood heating in America today has very little resemblance to that of 200 years ago. At that time in New England, 30 or more cords of wood per year were required to warm the house. With the more efficient wood-burning stoves of today and the use of home insulation, the same size house in the same climate can be heated more uniformly with only 3 to 8 cords of wood.

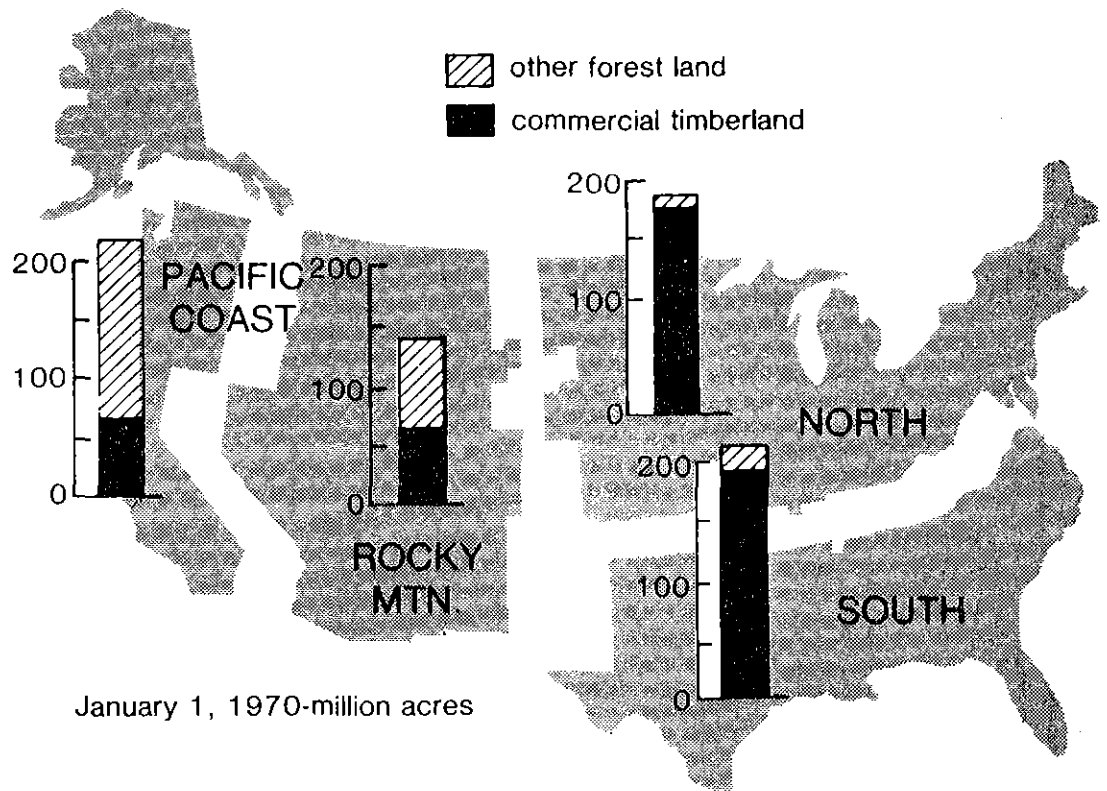


Figure 3-2. Area of Forest Land in the United States by Section

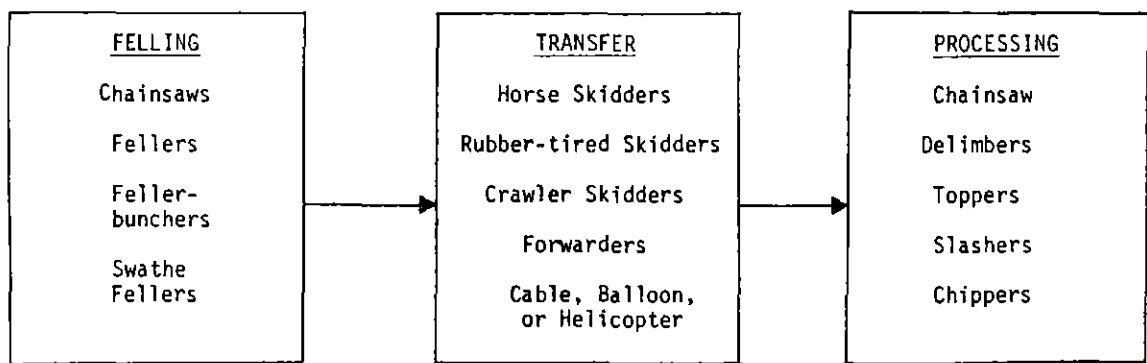


Figure 3-3. Stages in Harvesting and Equipment Used

The open fireplace was a functional and needed item, but today it is largely an interior decoration. A typical fireplace influences the energy balance in a house in three ways:

- Radiant energy from the fireplace heats the room in which it is located,
- Heat in the hot flue gases may conduct through the chimney walls into the house, and
- Warm house air is used for combustion and goes up the chimney.

The effects of these factors can be seen, for example, if a large steady fire is burning and 100 units of wood energy are placed into the fireplace: 15 units are radiated, 7 units are conducted through the chimney walls (less if some of the walls are not exposed to living areas), and 8 units efficiency of a large steady burning fire in an uncontrolled fireplace (having no control on the rate of combustion and on the position of the damper except "open" or "closed") is about 14 percent, which is consistent with other estimates of 5 to 15 percent. The average net efficiency in most homes is lower (-5 to +10 percent) because, with a small (or no) fire and the damper open, there is a net loss of heat. Standard fireplaces also consume huge amounts of air at a rate on the order of the design air-exchange rate of the house. Thus, especially modern tight houses may prevent the needed air from getting to the fireplace, resulting in smoking. The remedy usually requires increasing the air supply by opening a window (cold air) or basement door (cool air) or ducting air directly into the fireplace.

While the common fireplace net efficiency is estimated at 5 to 15 percent, the common "closed stove" net efficiency is claimed to be 5 to 8 times greater, or 40 to 70 percent. Closed stoves consume small amounts of air at a rate on the order of 10 to 20 percent of the design air-exchange rate for houses, and a stove that uses a minimum amount of air for a given combustion rate has an advantage. The less air admitted, the less air to be exhausted; hence, the velocity through the stove and stove pipe will be slower. Minimizing the amount of excess combustion air also increases the temperature of the hot gases because excess air dilutes the combustion products, making the mixture cooler. The higher the temperature of the gases, the larger the fraction of heat that will be transferred out of the stove and stove pipe, other things being equal. On most common closed stoves, there are basically two items that can be used to control the combustion rate: the inlet damper and the stovepipe damper. These two devices can control the combustion rate almost infinitely if the stove is airtight.

Both fireplaces and stoves can be made more efficient by better design and by using devices that utilize the energy in hot flue gases. There are two kinds of radiant energy coming out of a fireplace: primary radiation, coming directly from the coals and flames of the fire into the room, and secondary radiation, which is reflected or emitted from the fireplace walls. Direct radiation is maximum for fireplaces that are especially shallow, tall, and wide, because with this shape less radiation is intercepted by the

fireplace walls. Taken to the extreme, this geometry becomes a fire built against a flat wall, with a smoke-gathering hood far above the fire. The secondary radiation is mostly emitted radiation, no reflected primary radiation. To maximize the secondary radiation contribution to heating the room, two things can be done: the upper part of the back of the fireplace should slope forward and be tall, and the sides should not be perpendicular to the back, but angle outwards. To minimize the loss of heated room air up the chimney and to maximize the heat conducted out through the chimney walls, cutting back the airflow is required. A damper with adjustable settings placed at the throat of the chimney is ideal to meet the varying conditions of fireplace use.

The most effective fireplace is a circulating fireplace. These units consist basically of double-wall construction with a space between the walls through which air can circulate. Some units come with blowers, and others rely on natural convection to circulate the air. With reasonably careful design, the efficiency of this type of unit may approach the efficiency of a freestanding stove.

Stoves can be much more efficient by better control of the air inlet, less leakage of air into the stove, and use of the flue gas heat. A number of stoves are equipped with thermostatically controlled air inlets. Air heat extractors improve the heating efficiency of the system by extracting additional heat from the flue gases, over and above what would normally come out through the stove and stovepipe. Typical energy efficiency increases are in the range of 3 to 20 percent, which can result in 6 to 40 percent less wood burned for the same useful heat output (Ref. 4).

Stove efficiency can be further increased by baffling the flue gases and using secondary combustion chambers and different air flow patterns through the stove. These designs either reduce the amount of combustible material, i.e., carbon monoxide and particulates, exiting from the combustion chamber or increase the residence time of the hot gases within the system to allow further heat extraction from the flue gases.

A wood water-heating system is capable of supplying most of the hot water needs of a typical household during the months when the stove is in fairly constant use. The system uses the hot flue gases to heat the water, which circulates through coils located in the stovepipe. This system can be combined with solar or conventional heating to supply hot water when needed for the whole year.

~~A~~ Compared to coal combustion, the combustion efficiency (Btu's transferred to steam divided by Btu's in fuel) of wood firing is lower due to the heat consumed in vaporizing the water in the fuel. For wood fuel containing 50 percent moisture, combustion efficiency is typically 66 percent compared to 82 percent for coal. / Almost all wood-derived fuel burned in industrial boilers at present is used in the forest products industry. Applications unique to the forest products industry will be discussed below.

Conventional boilers can generally be classified as either firetube or watertube and as package boilers or field-erected units. Package boilers are shop fabricated and shipped as complete or nearly complete units. They are

limited in size to about 100,000 pounds of steam per hour due to limits on the physical dimensions that can be transported (Ref. 5). Most firetube boilers are package units, but the reverse is not necessarily true. The most prevalent size for wood-fired boilers is in the range of 15,000 to 100,000 pounds of steam per hour (Ref. 6). Some boilers burning fossil fuel plus wood have been installed in sizes greater than 500,000 pounds per hour steam capacity.

The most common firing method for wood-fired boilers, in all size ranges, is the spreader stoker (Ref. 6). Overfeed stokers are also common in sizes less than 250,000 pounds per hour steam capacity. Other types of firing, such as Dutch ovens and piles exist only in smaller sizes. Suspension-fired boilers are not common, and those that have been installed are in larger sizes, generally above 100,000 pounds of steam. Fluidized bed combustion is feasible and was developed for cellulose materials to incinerate pulp and paper mill wastes (Ref. 7), such combustion of wood for steam generation is not yet conventional technology. Inclined grate boilers are being tested and have demonstrated superior performance in Scandinavia.

Approximately half of the wood-fired boilers in the United States incorporate no provision for auxiliary fuels (Ref. 7). If the flow of wood is interrupted or the fuel is too wet to sustain combustion (greater than about 65 percent moisture), the fire will cease and the system must be shut down. The remaining wood-fired boilers use either coal, oil, or gas as their primary auxiliary fuels. Presuming the boiler is originally designed for a solid ash-containing fuel, the principal concern in multiple fuel firing is the synergistic effect of ash components. Wood ash, generally high in CaO, K₂O, and Na₂O, may act as a flux for silicates in the coal ash. Slagging and fouling problems may result. Similarly, burning oil in combustion with wood may cause fluxing of the refractory of the furnace walls. These interactions, however, can be predicted with fair success.

Although it is not, strictly speaking, direct combustion, low-Btu wood gasification is discussed in this document because the economics of low-Btu gasification require that it be directly coupled to the gas combustion unit. High-Btu gasification and other thermochemical wood conversion processes are excluded from the scope of this document.

Wood gasification is conducted by partial oxidation of the wood with air in a shaft furnace. Steam may also be added to produce the water-gas shift reaction and increase the hydrogen content of the produced gas. The resulting crude gas contains about 42 percent nitrogen and has a heating value of about 180 Btu per standard cubic foot (scf). A number of low-Btu wood gasification processes are under development. Small low-Btu gasifiers are available but, until very recently, have been considered for a 170 dry ton per day gasifier (Ref. 10). This appears to be changing rapidly with recently developed low-Btu gasifiers.

The previous discussion of industrial boilers adequately described the waste wood combustion technology used by the forest products industry, which accounts for nearly all of the current industrial wood and bark combustion. In addition to wood and bark combustion, however, black liquor

combustion provides a large contribution to the 1.1 quads of wood energy used in the forest products industry. Black liquor recovery boilers are unique to the pulp and paper industry.

The two main objectives in operating a recovery boiler are to recover chemicals in a reduced state (sulfur present as sulfide) and to generate steam. The combustion is therefore separated into two zones. The first zone is maintained under reducing conditions with less than stoichiometric air. The products of this zone are a molten discharge (smelt) with the sulfur present mainly as sulfide, and a discharge of gaseous organic matter having considerable heating value. The second zone of combustion starts with the introduction of secondary air under normal oxidizing conditions (10 to 20 percent excess air).

Unlike waste wood fuel, black liquor contains substantial amounts of sulfur and its combustion may require SO₂ scrubbing to meet State or Federal standards. This is sometimes accomplished by direct contact of the black liquor boiler feed with boiler flue gas. Direct contact scrubbing has the additional advantage of evaporating moisture from the black liquor and enhancing its heating value.

Four electric utilities have wood-firing capabilities in the United States, all having capacities under 50 MW. A capacity larger than 50 MW would make wood-firing more cost competitive with the large coal-fired power plants (800 MW); however, physical constraints associated with combusting wood and transportation economics with respect to supplying larger volumes of wood prohibit going to larger plant sizes (Ref. 11). The physical constraints refer to the 50- to 60-MW upper limit imposed by stoker firing technology. The large coal-fired power plants are fired with pulverized coal, analogous to wood suspension firing. Pulverizing wood fuel to this size (sawdust or finer) requires dry wood and is too costly. The development of proven fluidized bed combustion technology, however, would remove the limitation of stoker capacity. The economic constraints of transporting wood fuel also limit power plant capacity to that which can be supplied by fuel within a 50-mile radius, but the use of densified wood pellets may increase this limit to about 200 miles.

B. COMMERCIALIZATION OBJECTIVES

Wood is currently burned as a commercial fuel. The objective of wood combustion commercialization is the expansion of its use within the industrial, utility, and residential sectors. If present trends continue, 3.9 quads of energy will be produced from wood in 1990. This is an increase of 1.9 quads over the present 1.5 quads of energy produced from wood and wood waste. Residential use of wood as a fuel is expected to double over the next 12 years to about 0.6 quad per year (1990), with the increase

primarily in rural areas. At present, less than 0.1 quad of the energy consumed by electric utilities is met by wood combustion. If 25 percent of the new generating capacity (of municipal and cooperative power plants) were wood fired, 0.5 quad of energy could be produced by wood in 1990.

The major expansion in the use of wood for fuel will be through increased use of wastes in the wood products industry. In 1977, about 41 percent of its energy consumption was produced by oil and gas and 45 percent was self-generated by burning wood. The latter amounts to 1.1 quads per year. With the current trend in wood use, the industry can expect to be about 60 percent self-sufficient in 1990, with 2.8 quads coming from wood. An accelerated effort to burn wood might raise the wood products industry's energy self-sufficiency to 70 percent or 3.0 quads.

C. SUMMARY OF ENVIRONMENTAL CONCERNS

The major environmental concerns associated with wood combustion commercialization, in order of priority, are as follows:

- Air pollution from particulates, hydrocarbons, and carbon monoxide emissions,
- Fires caused by residential wood burners,
- Soil erosion and stream sedimentation from increased forest harvesting,
- Nutrient depletion from increased organic matter removal, and
- Ecosystem impacts associated with extensive forest harvesting.

The relationship of the technologies to each of these environmental concerns is discussed briefly below.

The primary environmental concern from the increased residential use of wood is air pollution and the resultant human health response. The quantity and quality of the emissions is a function of the type and condition of the wood and the type of wood-burning unit. Safety from flue fires and improper installation is also a major concern.

The primary air pollutant from wood-fired boilers is particulates, although CO and hydrocarbon emissions can be significant during periods of incomplete combustion. For utility boilers larger than 250 million Btu per hour heat input (>25 MW generating capacity), particulate emissions would have to meet the (proposed) New Source Performance Standards (NSPS), when finalized. The sulfur content, and resulting SO₂ emissions, of wood fuel are minimal with the exception of SO₂ emissions from black liquor boilers, which are controlled by scrubbing. NO_x emissions are comparable to coal firing, and lower combustion temperatures in fluidized bed combustion are expected to decrease these emissions.

Concern has been expressed by some of the large users of wood for energy that opacity regulations governing emissions from wood combustion units are too restrictive and will therefore hinder further commercialization. This issue is beginning to be studied, and studies are also underway to determine the relative toxicity of products of wood combustion compared to other fossil fuels. The occupational safety and health hazards to workers operating wood combustion equipment are no different from the hazards encountered with other fossil fuels, with one exception - sander dust is highly combustible and its handling requires utmost care to prevent explosions. In the area of solid waste, wood ash must be disposed of but is relatively inert and presents no major problems.

Most wood is transported by truck, and the environmental problems are noise and fugitive dust. The degree to which these are problems depends on the route and the frequency of transport. ~~Vehicle exhaust emissions contribute to air pollution, but only in minor quantities.~~

In the preparation of densified wood, emissions result from the drying step where product wood is burned to dry the raw chipped wood. The major pollutant is particulate matter and the major environmental concerns are human health from increased particulate exposure and regulatory compliance with the Clean Air Act Amendments of 1977.

Forest harvesting will have its greatest environmental impact through the potential for increased erosion and sedimentation, nutrient depletion and ecosystem disturbance. Mechanized harvesting may cause short-term localized concentrations of air pollutants, especially NO_x, during stable air episodes. Use of wood for energy may in the short run help improve forest utilization and quality but in the long run will compete with other uses of wood for recreation and other nonconsumptive uses of forests.

SECTION IV. ENVIRONMENTAL ANALYSIS AND ASSESSMENT

A. STATUS OF KNOWLEDGE OF ENVIRONMENTAL CONCERNS

The basic technology involved in integrated wood combustion systems is well established and the general nature of the environmental effects is well known. However, there are some new technologies, such as complete tree harvesting, advanced design residential wood burners, fluidized bed and sloping grate boilers and low-Btu gasifiers, about which the environmental information is poor. The biggest environmental uncertainty is raised by the potential for the wood combustion commercialization program to affect very large land areas and to become very pervasive throughout society. The environmental impacts can be both favorable and unfavorable. The balance between these will depend on social acceptance and responsibility to an unusually high degree rather than solely on the characteristics of the technology.

It is clear from Section III.A that wood combustion technology of the future will be substantially different from the past. To the extent that new ways are developed for using wood for energy, there will need to be accompanying environmental research. However, the environmental, health, and safety impacts of current technology are poorly known in the following areas:

- Environmental impact of wood particulate emissions,
- Health effects of hydrocarbon emissions from wood,
- Safety factors associated with flue fires and residential installations,
- Nutrient depletion from whole forest and complete tree harvesting systems, and
- Emissions from wood handling and leachate from wood storage.

The wood combustion commercialization program may have environmental impacts that are qualitatively understood but whose magnitude is unknown in the following areas:

- Soil erosion from forest lands and stream sedimentation,
- Changes in the water yield from forest watersheds,
- Ecological impact on aquatic and terrestrial ecosystems, and
- Impact of wood particulate emissions on State implementation plans.

The risk of proceeding toward commercialization of wood combustion is summarized in Table 4-1. The cost of controls are unknown in some instances. Because of the importance of community acceptance of environmentally sound procedures for wood combustion, there will also be a cost of public extension of these correct procedures, which will be above and beyond the cost of developing environmental control hardware and procedures.

B. ENVIRONMENTAL CONCERNS

AIR POLLUTION FROM WOOD COMBUSTION

1. Residential (Existing and Advanced Designs)

a. Existing Designs

The major pollutants of concern from present residential wood combustion devices are unburnt combustibles, namely, carbon monoxide, particulates, and hydrocarbons (Ref. 12). Significant quantities of these pollutants are produced because the devices are grossly inefficient due to high uncontrolled excess air rates, low combustion temperatures, and the absence of any sort of secondary combustion. Based on limited data, carbon monoxide is produced at a rate of about 120 pounds per ton of wood and particulate matter at a rate of 20 pounds per ton of wood (Ref. 13). These devices are usually used for supplemental heating and aesthetic satisfaction. Use of wood for residential heating will increase as oil and gas prices increase. The regional atmospheric impacts will be more widespread than other wood combustion systems because individual wood requirements can be satisfied by many localized sources. Thus, many rural and suburban communities throughout the United States will feel the emissions impact on regional air quality and visibility from residential wood utilization.

b. Advanced Designs

Information about emission characteristics from advanced residential wood combustion is not available. Advanced design residential units increase the combustion efficiency of wood burning but do not necessarily reduce the emission of pollutants. As the process heat efficiency for residential wood combustion increases, the mass emission rates should decrease; however, there has been no work to determine if this is indeed what happens in practice. There will also be a counterbalancing effect for the air emissions from advanced residential wood-burning stoves. The primary technique of advanced units is the limitation of vast quantities of excess air. Therefore, as the mass emission rate decreases, the concentration of pollutants may actually increase.

2. Industrial (Boilers, Transportation, and Handling Systems)

a. Boilers

Particulate matter is the primary air pollutant from wood combustion. Particulate emissions consist of inorganic materials, unburned hydrocarbons,

Table 4-1. Significance of Concern of Wood Combustion Technology

Environmental Concern	Status (State of Knowledge)	Research Time	Likelihood of a Finding Adverse to Technology Development*	Additional Mitigation Cost (\$) **	Program Delay	Environmental Risk of Proceeding with Technology Development
<u>Column Content</u> Concern statement as provided in Appendix A	Present Knowledge of: - severity of hazard - adequacy of control	Years of required research (as in Appendix A)	Estimate of probability of adverse finding (high, medium, or low) and character of likely adverse finding	The total cost (direct and indirect) of controls that may be required in the event of adverse finding	Period of program delay that may result from adverse finding	Assessment of risk of proceeding with technical development schedule in light of state-of-environmental knowledge, research schedule, and uncertainty of research outcome
AIR POLLUTION FROM WOOD COMBUSTION 1. <u>Residential</u> (Existing & Advanced Designs)	Degree of environmental impact from unburnt combustible wood particulates, hydrocarbons, and carbon monoxide is poorly known. Present regulations do not control wood burners used in homes. Emission characteristics of advanced burners not available.	3 years	Low - widespread expansion of wood burners without controls in rural and suburban areas would degrade regional air quality.	Low, < 10% addition to energy cost	Low - control requirements can be applied orderly with the technology expansion.	Low to medium
2. <u>Industrial</u> (Boilers, Transportation & Handling)	Technology is available to control emissions of particulates. Research is in progress to characterize organic combustion products. Dust and hazards from transport and handling are adaptable to control.			Low, < 5% addition to energy cost		
WATER POLLUTION/SEDIMENTATION 3. <u>Erosion/Sedimentation</u>	Soil loss during logging operations can become a downstream water quality problem and lead to land erosion if not controlled. Control methods from commercial industry can alleviate or control impacts.		Low - if widespread use of controls are employed.	Low	None	Low

Table 4-1. Significance of Concern of Wood Combustion Technology (Continued)

Environmental Concern	Status (State of Knowledge)	Research Time	Likelihood of a Finding Adverse to Technology Development*	Additional Mitigation Cost (\$) **	Program Delay	Environmental Risk of Proceeding with Technology Development
4. <u>Solid Waste Disposal</u> A. <u>Residential</u>	Ash residue normally would be deposited in sanitary landfill, a normal acceptable practice or in rural areas spread onto land as a conditioner.	2	Low - Characterization of ashes and mobility of leachate needs to be understood.	Low, <5% addition to energy cost	Low	Low
B. <u>Industrial and Utility</u>	Industrial ash less of a problem compared to coal solid waste.			Low, <5% addition to energy cost		
ECOLOGICAL IMPACTS FROM HARVESTING OF WOOD						
5. <u>Erosion/Sediment Transport</u> 6. <u>Water Yield Increase</u> 7. <u>Nutrient Depletion</u>	Long term efforts of harvesting wood for energy cannot be estimated from current information, some data available but not complete. Forest management practices can minimize impact.	5-7 years	Medium	Assumed insignificant	Low, - if inadequate controls can be applied during industry expansion	Low
8. <u>Aquatic Ecosystems</u>	Impact on fresh waterways and fish from increased solids and sediment are understood. Management practices could minimize impact.	5	Medium - site relation to waterways could cause some problems, control practices need to be developed and employed.	Assumed insignificant	Low	Low
9. <u>Terrestrial Ecosystems and Wildlife</u>	Changes to ecosystem are reasonably well known. Land management practices must be carefully applied. Impact from wood burning would contribute to deforestation and increase global CO ₂ .	5	Low - mechanisms must be developed to ensure control practices are applied.	Assumed insignificant	Low	Low
HEALTH AND SAFETY						
10. <u>Occupational Health & Safety</u>	Occupational risks for logging are known to be high, requiring regulations and inspection. Workplace hazards are same as conventional utility boilers.	2	Low - care in control practices for residential chimney cleaning to reduce fires and inhalation of deposits needed. Logging risks are OSHA regulated.	Insignificant	Low - adequate practices can be developed and employed during industry expansion	Low
11. <u>General Population Safety</u>	Home burner risks are usually with carelessness or unsafe installation.	2	Low	Insignificant	Low	Low - medium - Residential safety from improper burners and deposit buildups could be difficult to enforce.
12. <u>General Population Health</u>	Can increase local particulates.	5	Low - depends on emission activity.	Low	Low	Low
SOCIOECONOMIC EFFECTS						
13. <u>Land Use Changes and Aesthetics</u>	Industry data available on impacts of massive harvesting of timber. Management practices from lumber industry can be applied.	2	Low - land practices can result in adequate control.	Insignificant	None	Low
14. <u>Economic Impacts</u>	May benefit regional economy and provide jobs to low-skilled work force.	2	Low - medium	Insignificant	None	Low

and unburned carbon. The size of the particles can range from submicron "smoke" particles to pieces of wood or char one-half inch or larger. The material is usually chemically stable as it enters the atmosphere, but some boilers emit still-burning particles of wood that may be observed as a discharge of glowing sparks. The capability and costs of particulate emission control technology are well demonstrated. Appropriate control devices are inertial collectors (cyclones), wet scrubbers, dry scrubbers, baghouses, and electrostatic precipitators (ESPs).

Control technology for the collection of over 99 percent of particulates is currently available and has been demonstrated to meet the proposed NSPS. As is the case with other fossil fuel combustion devices, opacity is often the controlling emission parameter rather than particulate mass emission rates. There is concern in the wood products industry that the proposed NSPS for opacity are too restrictive, not cost effective, and may prevent further wood combustion commercialization. The most promising control method for meeting mass emission rates and opacity appears to be the multiple cyclone connected in series with a low-energy wet scrubber. Early results from the operation of dry granular bed scrubbers indicate that this device may be the best choice in the near future.

SO₂ is a minor pollutant during wood combustion because of the low fuel sulfur content. Black liquor boilers in the pulp and paper industry are an exception to this generalization, and typically require SO₂ scrubbing.

NO_x emissions from wood combustion appear to be comparable to NO_x emissions from coal firing. This is mildly surprising because of the lower fuel nitrogen content and lower combustion temperatures generally associated with wood combustion. Although NO_x is not considered a serious environmental limitation to wood combustion commercialization, EPA-estimated emission factors place NO_x emissions at 1.2 pounds per 10⁶ Btu for wood-fired boilers. NO_x control technology is in an early stage of development for fossil fuels and is untried for wood-fired boilers.

Carbon monoxide and hydrocarbon emissions, especially polycyclic organic matter (POM), are of concern during periods of incomplete combustion. No specific data are presently available on the types of organic compounds produced during wood combustion, but research is in progress to characterize these emissions.

b. Transportation

Air emissions from wood fuel transportation are generated vehicle exhaust and fugitive dust. They can be estimated, although not necessarily predicted. Relative to emissions during combustion, exhaust emissions during transportation are minor. Fugitive dust emissions are not as well defined and are site specific as well as seasonally variable (wet versus dry season).

c. Handling Systems

Air emissions from wood handling systems result from fuel combustion, power machinery (such as chippers), and fugitive emissions from storage piles. These air emissions are minor compared to emissions produced during combustion of the wood fuel. The fugitive dust emission from chip handling are poorly defined, but emissions for fuel storage piles are localized and thus more amenable to control.

WATER POLLUTION/SEDIMENTATION

3. Erosion/Sedimentation

The principal concern over water pollution during expanded use of wood fuels is from sediment transport during harvesting. The soil loss from harvesting is transported as sediment in streams and may become a water quality problem downstream from the harvesting operation. The potential for water pollution from leachate from exposed wood storage piles and ash disposal facilities remains largely unknown. Water pollution from boiler operation and steam generation is expected to be essentially the same as with coal-fired facilities. It should be amenable to treatment similar to that used for coal-fired boilers.

4. Solid Waste Disposal

a. Residential

Solid residues from wood combustion are generally classified as relatively inert. The major components of the wood residue are silica and alumina oxides with minor fractions of sodium, magnesium, and potassium. The only specie identified in wood ash that is considered toxic is lead, and this was found in minor quantities (0.003ppm) (Ref. 6).

With the increased use of wood for supplemental residential heating, more ash wastes from a larger population segment will be generated. In the rural communities, this ash is generally spread over the land as a soil conditioner and nutrient supplement. In the suburbs, the ash would typically be hauled to a sanitary landfill. Disposal of these solid wastes in the above manner is considered an environmentally acceptable procedure. However, as the amount of solid waste increases within the confined regions of use, some localized problems with surface water quality may occur. The impact is considered minor because the total solids production is low and the regions of use have large excesses of surface water discharges.

b. Industrial and Utility

Solid residues from wood combustion have not received a great deal of attention in the technical literature. Fly ash, boiler ash, clinker, and slag are the main types of solid wastes. These are generally classified as relatively inert and far less a problem than coal combustion waste solids. Disposal of this ash in a safe and environmentally acceptable manner should not require any special provisions (Ref. 10).

ECOLOGICAL IMPACTS FROM HARVESTING OF WOOD

5. Erosion/Sediment Transport

Soil erosion rates from undisturbed forests are among the lowest of all natural land surfaces, with average rates ranging from 0.05 to 0.10 ton/acre/year. This rate compares with an average of 0.38 ton/acre/year for grassland and 75.7 tons/acre/year for croplands in the United States (Refs. 14 and 15).

Harvesting of wood increases erosion rates in three ways: by removing or reducing the vegetation cover on the harvest site, by disturbing the surface (especially along skid trails and logging roads), and by creating conditions that can cause mass soil movements. The Universal Soil Loss Equation (Ref. 16), although originally developed for predicting soil loss from agricultural lands, can be used for predicting the rate of erosion from forest harvesting. The equation takes into consideration all the factors affecting erosion except the type of equipment used. The soil loss from harvesting is transported as sediment in streams and may become a water quality problem downstream.

Among the four major regions where wood energy is likely to become important (Northeast, Southeast, North Central, and Northwest), there are notable differences with respect to the erosion problems that may be experienced. However, variability within regions is probably as great as it is between them. The Southeast, because of high rainfall intensity (Ref. 16), has the greatest erosion potential, although the incidence of steep slopes is greater in the Northwest. In the Northwest, there is very great variability of soil, slope, and rainfall, and therefore the erosion potential is very variable. The potential for mass movement is also greater in the Northwest than in the Northeast. However, the larger number of small private landowners in the Northeast than in the Northwest increases the problems of education and supervision for soil conservation. Furthermore, the undesirable impacts of soil erosion and sediment pollution of water will have greater impact on the public, due to the greater intensity of forest land use in the Northeast for recreation, hunting, and sportfishing.

Control of soil erosion on the harvesting site can best be achieved by the choice of harvesting system. Thinning and selection cutting produce very much lower erosion rates than clearcutting systems under all soil, slope, and rainfall conditions. If clearcutting is required for silvicultural or economic reasons, patch cutting or strip cutting on the contour will produce much lower erosion rates than full clearcutting under almost all conditions.

6. Water Yield Increase

Water yield temporarily increases following harvest operations because of the removal of trees that normally transpire water from the soil and because of the removal of vegetation, which increases runoff and overflow. The cutting method is the primary determinant of the increased water yield for the first 3 to 10 years following harvest (Ref. 17).

7. Nutrient Depletion

The long-term effects of harvesting residues and nonmerchantable timber for energy cannot be estimated from data currently available. Nutrient cycling has been the subject of considerable research for almost 50 years on all forest and soil types, yet relatively little of the data is applicable to the removal of branches, tops, and nonmerchantable species for energy. Much of the nutrient cycling research was conducted either on natural, nonmanaged systems or on harvest operations where only the merchantable bole was removed. Only limited studies of whole-tree harvest impacts have been conducted (Ref. 18).

Tree harvesting disrupts nutrient cycles, accelerates loss of nutrients, and prolongs nutrient replacement by natural processes. When greater proportions of the biomass are removed, as in removal of residues for energy or whole-tree harvesting, the nutrient drain will be more serious and the replenishment of nutrients by natural processes will be slower. Nutrient availability is not a direct function of nutrients present in the forest systems, however. High productivity is possible on relatively infertile soils, and soils with high total nutrient contents may be very unproductive because the nutrients are not available to plants (Ref. 19).

Nutrient depletion due to increased removal of residues can be reduced by management practices that minimize repetitive use of heavy equipment, by the use of equipment with weight evenly distributed over a large area (to minimize soil structure damage and therefore reduced nutrient availability, root penetration, and soil moisture), and by fertilization during regeneration. Forest fertilization is a relatively new concept, and not widely practiced.

8. Aquatic Ecosystems

The impacts of stream pollution from harvest operations on fish and other aquatic life are well known and should be no different for the increased water pollution caused by removal of residues for energy. In general, these impacts on aquatic ecosystems have been described for most stream types and silvicultural systems. The magnitude of such impact will depend on the extensiveness of forest harvesting and the amount of control exercised.

Fish and aquatic life will be adversely affected by any increased suspended solids, sediments, chemical ions resulting from leaching, and increased water temperature. Suspended solids and increased temperature reduce the dissolved oxygen level in surface waters. Sediments may cover fish spawning areas, shelter, and food supplies. Large quantities of residues left in streams can interfere with fish movements and stream flow. Therefore, removing residues may improve stream quality.

Damage to ecosystems can be reduced if sound management practices are used. These are fairly well known, although they may be too expensive to be used on private land for harvest of residues for energy. These

management control policies have already been described in this document as they relate to primary water quality impacts.

9. Terrestrial Ecosystems and Wildlife

a. Ecosystems and Wildlife

The changes in the forest ecosystem resulting from various silvicultural practices are reasonably well known. The removal of residues for energy, compared to other residue management practices, will result in changes to the terrestrial ecosystem that may be considered beneficial and/or detrimental, depending on other management objectives for that land. Removal of residues has varied effects on wildlife, depending on the forest type and the wildlife species. Larger game animals will generally benefit the most, and small mammal and bird populations will decrease when forest residues are removed. The changes in wildlife populations from residue removal are far less than the changes caused by the primary harvest operations in removing merchantable timber. Timber harvest generally increases wildlife populations because the early successional stages support far greater populations and species than unbroken expanses of mature timber, especially softwoods. Large clearcuts, however, decrease populations because many species use forests for shelter and will not browse or feed in large open areas.

The silvicultural and wildlife management objectives for a given forest stand must be determined before any management control practices can be recommended. The general effects of various silvicultural practices (including residue removal) on bird, small and large mammal populations, and vegetation species composition in various forest types are known, as are the management practices to minimize the impact on any one of these groups. The issue will be whether a mechanism can be developed to ensure that the information is applied.

b. Aesthetics

Aesthetic appearance is often a major factor in the recreational use of forests, and harvest operations generally create unpleasant views. Removal of forest residues generally improves the appearance of a recently logged area. In addition, forest debris caused by harvesting may impede access to streams and other forest areas by fishermen and hunters. Leaving slash and logging debris in the woods after clearcutting is often unacceptable, because the public considers this an eyesore and evidence of waste in the forest industry. Removal of slash for energy, then, may improve the aesthetic and recreational qualities of the forest. As the demand for recreation increases, pressures against consumptive uses of forests (primarily timber harvest) will increase. Because timber and pulpwood will command higher stumpage prices, it may be that whole-forest harvesting for energy will be uneconomical in the long term, as demands for nonconsumptive uses of forest lands increase. The supply of residues from logging operations will not be affected by increasing recreation demands on forest land, except as the total acreage logged is affected.

c. Contribution to Climatic Effects Due to Atmospheric CO₂ Increase

The CO₂ content of air has unquestionably been increasing in the past 100 years, primarily from the CO₂ produced when fossil fuels are burned (Ref. 20). Another major cause of CO₂ increase is the deforestation occurring in many parts of the world because the carbon cycled within forests has been released to the atmosphere as CO₂. Substituting wood burning for coal burning may reduce the potential long-term impacts resulting from increased CO₂ in the atmosphere, provided there is active reforestation. If harvest of wood for energy results in deforestation or in a net decrease of world forests, wood energy will also contribute to global increases of CO₂.

10. Occupational Health and Safety

The logging industry is considered a high risk industry by Federal agencies and therefore subject to regulation and frequent inspection. If logging increases, the absolute number of man-days lost in this industry can be expected to increase. The applicable sections of the Federal Occupational Safety and Health Act (OSHA) are as follows:

<u>OSHA Regulation</u>	<u>Category</u>
1910.261	Pulp, Paper, and Paperboard Mills
1910.265	Sawmills
1910.266	Pulp Wood Logging

These regulations establish safety procedures both in the forest and in the processing plants.

The workplace hazards associated with wood-fired boilers are no greater than those of coal-fired boilers. Wood gasification deserves special mention because of the risk of fugitive CO emissions. Good engineering practice is well known for CO handling systems, however. In the recent past, CO (known as town gas) was even distributed as a utility for residential heating.

11. General Population Safety

There will be increased risk to the home occupant from the installation of wood-burning devices when compared with the more conventional heating systems. However, most building fires associated with wood-burning devices are due to unsafe installations, not inherent dangers from heating with wood (Ref. 20). By complying with safety standards and building codes, virtually all danger is eliminated except user carelessness.

As additional heat recovery equipment is installed in the stove, the chances for chimney fires will increase. A carbonaceous residue called creosote is condensed from the flue gases as they are cooled. Although chimney fires can also occur with existing stoves, the amount of creosote deposited in the chimney and on the heat recovery equipment will definitely

be increased with the advanced designs (Ref. 4). This creosote deposit is ignited from the flue gases from a hot fire and can create major problems if not immediately attended. The tighter air designs in the advanced stoves offer the owners more control over the impacts of such a fire but still require that immediate attention be given. There are chemicals sold to clean the stovepipes and chimneys and also procedures to follow to reduce the intensity of chimney fires. However, the best method for eliminating chimney fires is a periodic mechanical cleaning of the chimney.

12. General Population Health

As the use of wood burned for residential heating increases, the possibility that local air quality might be degraded also increases. The impact on ambient air quality from the increased use of advanced design units is uncertain. Human respiratory disease might increase from the air emissions of fireplaces and stoves, especially in regions of great concentration of wood-burning equipment (Ref. 13). Further study of the parameters affecting regional air quality must be accomplished before an estimate of the impacts on human health can be stated.

The basis for existing particulate emission standards has been the presumed adverse health effects of particulates in general. Recent findings now suggest that specific particulate species (sulfates) and specific particle sizes (less than 10 microns) may be the major cause of adverse health impacts (Ref. 22).

SOCIOECONOMIC EFFECTS

13. Land Use Changes and Aesthetics

The land use changes resulting from the harvest of wood for energy will vary from region to region and according to the method of harvest employed. In some cases, multiple-use forest land will be converted to energy plantations. Where this occurs, a more cultivated landscape will appear. In other cases, marginally productive agricultural land will be planted to fast-growing tree species, where the affect will be to create a more wooded landscape. Much wood for energy will be harvested from multiple-use forest lands. Not only will this harvest provide an additional crop for these landowners but, conducted properly, it will also improve growth on remaining high-value trees. These operations will strengthen the financial profitability of multiple-use forests and help to stabilize land use in its present form. On the other hand, the effects of extensive clearcutting of natural forests to produce energy are more complex. Improperly conducted, such harvests may deleteriously affect aesthetic landscape qualities and consequently reduce a region's desirability as a recreation center or place to live.

14. Economic Impacts

In addition to affecting current land use, harvesting of wood to produce energy will also stimulate the regional economy and alter other uses of the forest. The effects of harvesting wood for energy on other forest uses are

uncertain. In large part, these impacts will depend on the harvest systems employed for the wood-energy market and the relative value of forest fiber used to produce materials versus that used to produce energy.

C. LEGISLATIVE STATUS

The final concern in expansion of wood fuel combustion is the legal framework within which this must take place. Table 4-2 lists the regulatory constraints which are or may be placed on wood combustion for environmental protection. Based on current assessments, control technologies are presently available to ensure compliance with the listed regulations; however, as discussed earlier, new regulations may be needed in some areas. This determination will have to await resolution of the unknown problems identified in Table 4-1. There are no existing or anticipated regulations for the emissions from residential fireplaces and stoves (Ref. 23); however, investigation presently underway by DOE contractors and the National Bureau of Standards may identify the need for such regulations.

In the area of larger wood-burning units, the recently proposed NSPS for utility stations with a boiler heat release of greater than 250 million Btu per hour (equivalent to 25 MW electric generating capacity) included, for the first time, emission requirements for wood. These regulations require performance standards similar to coal combustion. However, the applicability of these standards may be limited because, due to resource limitations, 250 million Btu per hour has historically been on the high end of the size range of wood-fired boilers.

Under the Clean Air Act Amendments, new sources emitting greater than 100 tons per year of criteria pollutants will be required to obtain a permit for the source. These rules apply only to regions where ambient air quality is very good, in order to prevent significant deterioration of regional air quality by large sources. Most forests and the accompanying potential users of the densified biomass are probably located in these regions and will fall under these regulations.

Many states have adopted particulate emission standards that are at least as stringent as Federal NSPS. Existing State regulations applicable to wood-fired boilers are summarized in Table 4-3 (Ref. 7). Point source discharges from wood-fired power plants will have to obtain discharge permits in compliance with the National Pollution Discharge Elimination System. The Resource Conservation and Recovery Act addresses the identification and treatment of potentially hazardous wastes; however, wood ash solids should not fall under this act.

The only national legislation that could regulate soil erosion and sedimentation from wood harvesting areas is the development of control plans under Section 208 of the Federal Water Pollution Control Act, which is aimed at protecting water quality from nonpoint sources of pollution discharge. The status of these 208 plans varies from state to state, and it is too early to determine their effectiveness in controlling forest harvesting erosion and sedimentation or their impact on wood availability.

Table 4-2. Regulatory Impacts on Wood Combustion

Legislation	Applicant Pollutant or Residuals	Standards (Current or Proposed)	Possible New Standards
Clean Air Act	<p>This legislation will have a major impact for criteria pollutants. Based on the ambient air quality, most regions of the United States are evaluated as either nonattainment or clean. The major wood-growing regions are remotely located in clean air quality areas and therefore fall under the Prevention of Significant Deterioration (PSD) Regulations of the act. The act limits the degree of air quality degradation in PSD areas as a function of general industrial activity. The pollutant of immediate concern is particulate emissions and accompanying visibility reductions. Other pollutants regulated by ambient air quality standards include carbon monoxide, photochemical oxidants, sulfur dioxide, nitrogen oxides, and hydrocarbons.</p>	<p>New Source Performance Standards are currently proposed for large utility stations generally considered larger than economically attractive for wood firing (greater than 250 million Btu per hour heat input).</p> <p>Depending upon the specific location, ambient air quality degradation would be regulated by the PSD permit allowables.</p>	None currently identified
Water Pollution Control Act	<p>For industrial applications, pollutant concentrations are regulated by the National Pollutant Discharge Elimination System (NPDES) Permits.</p> <p>For the utility industry, wood combustion would probably fall under the "small unit" subcategory. The list of pollutants regulated include free available chlorine, total suspended solids, oil and grease, copper, and iron.</p>	<p>Regulations are as required by the discharge limitations for the specific industry.</p> <p>The regulations distinguish between existing and new sources and also if the discharge is sent to a publicly owned treatment plant rather than to a receiving stream. The regulations also distinguish between the many sources within a power plant such as low volume wastes, bottom ash and fly ash, transport water, metal cleaning, and boiler and cooling tower blowdown.</p>	

Table 4-2. Regulatory Impacts on Wood Combustion (Continued)

Legislation	Applicant Pollutant or Residuals	Standards (Current or Proposed)	Possible New Standards
Water Pollution Control Act (continued)	Nonpoint source discharges are regulated under section 208 of the act.	Each water quality planning region is required to identify the priority sources of nonpoint discharge in the region and to prepare plans for their control.	None currently identified
Thermal Discharges	Basis of regulation is to minimize the impact of thermal discharges on the receiving waters' overall ecosystem balance.	The limitations of the regulation are generally determined by the state agencies for site-specific applications.	
Occupational Safety and Health Act	Aim is to limit worker exposure to various regulated chemicals. Regulations also include considerations for worker safety in the workplace.	Logging is considered a high-risk occupation and often subject to inspection and regulation.	
Resource Conservation and Recovery Act	Hazardous solid waste must be monitored.	Treatment to minimize the impact on local water resources must be performed. Often this treatment consists of chemical adjustment, dewatering, and containment of solids.	
1897 USFS Organic Act 1960 Multiple Use Act 1976 National Forest Management Act	Irreversible damage to soil and water and sustaining forest yield could result.	Collectively they provide authority to the Forest Service to regulate the allowable cut and the conditions of harvesting.	
National Environmental Policy Act	The environmental impact of Federal projects must be analyzed.	An Environmental Assessment or Environmental Impact Statement will be prepared and reviewed.	
Federal Endangered Species Act	Habitat of threatened or endangered species could be damaged.	The Endangered Species Commission of the Department of the Interior will review the Environmental Assessment or Environmental Impact Statement for harvesting on Federal lands. The Commission can approve or disapprove the harvesting plan to the extent that it affects the endangered species.	

Table 4-3. Summary of Regulations for Wood-Fired Boilers^a

State or County	Date of Reg. or Rec'd.	Particulate Emission Regulation										Old/New Date	Other Standards; Notes
		gr/scf at 12% CO ₂		Opacity, %		Opacity-sec. exception, sec/hr		lb/10 ⁶ Btu		lb/ton Process Weight			
		Old	New	Old	New	Old	New	Old	New	Old	New		
Alabama 1	5/75							0.12-0.50 ^b		0.093-11.2 ^b		None Stated	Class 1 County-50% + urban Class 2 County-50% + rural
Alabama 2	5/75							0.12-0.80	0.12-0.50	0.138-11.0	0.093-11.2	N.S.		Wood waste special reg.
Alaska	7/72	0.15 ^{bc}		20 ^b		180/hr ^c						N.S.	Based on higher heat value
Arizona	5/75											N.S.	100 lb/hr max allowable
Arkansas	7/75			20 ^b		N.S.		0.025-0.599 ^b				N.S.	Desert basin
Calif. Kern County	1/74	0.1 ^{bc}	Max 10 lb/hr							0.093-14.4 ^b		N.S.	
Calif. Kern County	1/74	0.1 ^{bc}	EPA std							0.093-14.4 ^b	(10 lb/hr max)	8/71	Valley basin
Calif. L.A. County	1/72	0.3 ^{bc}	Max 10 lb/hr							1.333-8.24 ^b	(40 lb/hr max)	8/71	Desert basin
Calif. Bay Area	5/70	0.15 ^b								1.33-9.60		1/73	
Connecticut	5/74									1.33-11.02		N.S.	0.020-0.100 gr/scf may be subst
Delaware	5/75							0.70 ^b	0.10			N.S.	Btu from mfg. maximum
District of Columbia	3/74							0.3				N.S.	Btu from mfg. maximum
Florida Dade Co.	5/75			40 ^b		180/hr ^d		0.02-0.13 ^b				N.S.	Btu determination N.S.
Florida	4/75			30	30	120/hr	120/hr				1.33-9.60 ^b		
Georgia	5/75			20	20	120/hr	120/hr	0.24-0.7	0.1-0.5			7/74	Stds for 30x10 ⁶ Btu/hr plus
Hawaii	5/75											1/72	
Ideho	5/75			40	20	150/hr	180/hr				1.33-11.02	1.33-11.2	
Illinois, Chicago	5/75							0.12-0.6	0.12-0.6			N.S.	All sources after 1/73
Illinois, Other	5/75							0.2	0.1			N.S.	Btu from heat content
Indiana	11/74							0.1-1.0	0.1			N.S.	All sources new
Iowa	5/75							0.8	0.6			11/74	After 6/75 areas
Kansas	1/72							0.6-0.8	0.6			N.S.	0.1 lb/10 ⁶ Btu Chic.&Ind. pls. ^
Kentucky	5/75							0.12-0.60 ^b				N.S.	Btu from mfg. maximum
Louisiana	5/75							0.11-0.80	0.10-0.56			4/72	Btu from heat input
Maine	5/75							0.6 ^b				N.S.	
Maryland	5/75	(Area II)	0.03-0.05						0.3-0.6			1/72	All sources new after 6/75
Massachusetts	3/74							0.12-0.60				3/74	99% efficiency dust coll. reqd.
Michigan	5/75	0.2 ^b		20 ^b		180/hr ^b		0.15	0.10			N.S.	
Minnesota	5/75			20 ^b		260/hr ^b						N.S.	0.5 lb particulate/1000 lb gas
Mississippi	5/75	0.30 ^b		40 ^b		900/hr ^b		0.4-0.6 ^b				N.S.	Fossil fuel regulations
Missouri	4/71											N.S.	
Mo. Springfield Green Co.	3/74	0.02-0.10 ^{bc}		40	20	360/hr	360/hr	1.18-0.6 ^b	0.10-0.6			4/71	Btu from mfg. maximum
Montana	5/74							0.12-0.6 ^b				N.S.	
Nebraska	6/75							0.2-0.6	0.12-0.6			N.S.	Btu from heat input
Nevada	5/75							0.15-0.6 ^b				N.S.	Btu from heat input
New Hampshire	3/74			40	20	360/hr	360/hr	0.044-1.08 ^b				N.S.	Btu from mfg. maximum
New Jersey	1/74							0.19-0.60	0.12-0.60			2/72	Btu from heat input
New Mexico	5/75			20 ^b		180/hr ^b		0.1-0.6				N.S.	Btu from heat input
New York	5/74											N.S.	
New York City	5/74							0.6	0.136-0.600			1/72	Heat input - normal operat.
North Carolina	1/71							0.09-0.40 ^b				N.S.	
North Dakota	5/74							0.15-0.70 ^b				N.S.	8000 Btu dry pound
Ohio	5/74							0.80	0.180-0.600			N.S.	Btu from heat input
Oklahoma	6/70							0.1-0.6 ^b				N.S.	Btu from heat input
Oregon	3/74	0.2 ^c	0.1 ^c	40	20			0.6	0.10-0.60			6/70	Btu from capacity rating
Pa. Allegheny Co.	5/75							0.08-0.40 ^b				3/74	
Philadelphia	5/75											N.S.	Btu from heat input 0.1 lb/10 ³
South Carolina	5/75			40	20	300/hr	300/hr	0.6-0.8	0.02-0.6			5/69	(Old)0.2 lb/10 ³ gas (New) ^
South Dakota	5/75							0.30 ^b				2/71	Btu from capacity rating
Tennessee	5/75							0.1-0.6 ^b				N.S.	Btu from mfg. maximum
Texas	5/75							0.1-0.3 ^b	0.1-0.5			7/75	Btu from heat input
Utah	1/72											N.S.	Fossil fuel regulations
Vermont	5/75											N.S.	Minimum 85% control
West Virginia	5/75							0.1-0.5 ^b				N.S.	Btu from heat input
Wisc. Milwaukee Co.	5/74			20 ^b		300/hr ^b		0.05-0.34 ^b				N.S.	Btu from total design input
Washington	5/75							0.10-0.60 ^b				N.S.	Btu input to stack
Wyoming	6/75	0.20 ^c	0.10 ^c	40	20	900/8 hr	120/hr	0.1-0.3 ^b	0.18-0.60 ^b			7/75	Btu input

^a When range of values is given, emissions are from tables in regulations.

^b Old or new boiler not stated.

^c Wet or dry scf not stated.

From Ref. 7.

Harvesting on Federal forest land is governed by U.S. Forest Service harvesting regulations, which are designed to ensure good management for protection of the forest resource and water quality. State legislation of soil erosion from forestry is mainly in the form of forest practices legislation, but only a few states have such comprehensive legislation. Many states have none.

There are no specific laws prohibiting excess removal of biomass from fragile sites, but the Forest Service has some fairly strong regulations on allowable cut and timber sale practices. The primary enabling legislation affecting federally-owned forest land are the 1897 Organic Act, the 1960 Multiple Use Act, and the 1976 National Forest Management Act. The latter act includes requirements that timber be harvested only where soil or other water conditions will not be irreversibly damaged, harvests be on a sustained yield basis, silvicultural prescriptions be written to ensure that stands of trees will generally not be harvested until they are mature (although thinning and other stand improvement work is permitted), clearcutting meets certain standards, and land management plans be written with public input (Ref. 24).

Energy recovery is not legally recognized as one of the five multiple uses of forest lands, so it is expected that sales of timber or residues for energy will be done only to increase the value of the commercial timber, improve the forest environment, or reduce revegetation costs.

There are currently no effective national laws to reduce soil erosion and nutrient depletion from agricultural and forest operations. Limited funds are available to small woodlot owners for timber stand improvement through the Forestry Incentives Program, but historically very few landowners have participated in that program.

Water pollution from logging operations is considered a nonpoint source, and EPA has not published any regulations on these nonpoint sources to date. These regulations are expected within 5 years and will primarily be in the form of "best management practices."

Some states have laws regulating timber harvest, slash disposal, and use of wetlands (Ref. 17). The Endangered Species legislation may limit logging on Federal land areas where it would impact the habit of endangered species.

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DEQ official explains good, bad in use of wood stoves

By ROY SCARBROUGH
Mail Tribune Staff Writer

Wood stoves may reduce our dependence on foreign oil, but they also may be hazardous to our health.

Dr. John Cooper, principal investigator for the Department of Environmental Quality, addressed the Greater Medford Chamber of Commerce's noon forum Monday on the mixed blessings of wood heat.

In wood stove smoke, Cooper said, "we find almost all of the chemicals found in cigarette smoke."

He said wood smoke contains known cancer-causing substances.

Cooper suggested that the nation's cancer rate would increase if "we could make a good-tasting sawdust cigarette."

Wood heat poses some special problems, he said. Because reliance on wood heat is on the rise in residential areas, it increases the health risks to children and elderly people who live near that source of pollutant.

He noted that between 1940 and 1974 the use of wood heat declined sharply.

But after the 1974 oil embargo, people began switching to wood heat as an alternative to higher priced fuels.

Cooper fears that wood stoves will continue to put an increasing amount of smoke in the air.

"You will see more and more of it as fuel bills increase," he says. "It could be a substantial problem."

As the price of fuel rises, more people will rely on wood as their primary source of fuel for heating.

In addition, use of wood for heating is moving from the rural areas to areas of more concentrated population.

As garbage collection costs increase, Cooper said, people may burn more trash for heat.

While few people would ever consider dumping their trash in their neighbor's yard, Cooper said, "I don't think it's proper to throw your trash in the air I breathe."

Cooper said coal, which has been described as being particularly dirty, is still a potentially cleaner fuel than wood.

Cooper said a stove could be designed to burn coal more efficiently than it could burn wood.

Coal, Cooper said, "has the potential of being a very good source of energy."

Honors banquet slated

ASHLAND — This week and next, Southern Oregon State College is honoring outstanding students at awards banquets.

Students who have made contributions to the college through extra-curricular activities were honored Monday night at the Activities Banquet in the Stevenson Union Dining Room. At 6 p.m. May 14, students who excelled academically will be recognized.

Dean of Academic Affairs Ernest Ettlich and Dean of Students Mary Christlieb will be emcees at the Academic Banquet. College President Natale Sicuro will open ceremonies at which about 250 people are expected.

For reservations or information, call 482-6221.

State okays two grants for bicycles

SALEM — An Ashland bicycle path and a Jackson County bike map project will receive Federal Highway Administration grants.

State Bicycle Coordinator Don Shaffer said Ashland will receive \$33,240 to construct a pathway along the Southern Pacific railroad tracks from East Main Street to Walker Avenue.

Ashland's grant was the largest allocation in Oregon for bicycle projects, Shaffer said. About \$100,000 was available to Oregon.

Jackson County will get \$1,800 to produce a map that shows the suitability of city and county roads for bicycle use.

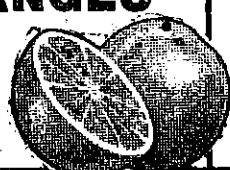

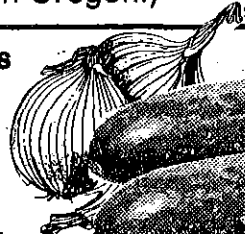

Each grant represents 75 percent of the project cost. Local funding will make up the rest of the cost.

Total cost of the Ashland project is \$44,320. The path

BACK UNDER ORIGINAL OWNERSHIP!

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OSU coal rese

By JENNY SPIKER
Democrat-Herald Writer

CORVALLIS — Problem: The world is hungry for more electricity.

Suggestion: Burn more coal.

Problem: Coal pollutes when it burns.

Solution: Figure out a way to burn coal more cleanly.

A good portion of the scientific research that's expected to bring about a new generation of coal-powered electrical plants in the 1980s is being conducted at Oregon State University.

It all started in 1969 with a book that sold only a couple-thousand copies and quickly went out of print. But the book, written by Oregon State University Professor Octave Levenspiel, was a catalyst for a major research effort. And that effort has brought nearly \$2 million in grants to the university and captured worldwide attention.

The book, "Fluidization Engineering," was written by Levenspiel and Daizo Kunii of the University of Tokyo. At first,

**'We needed
to find a way to burn coal
in an environmentally
conscious age.'**

— Octave Levenspiel

no one but fellow chemical-engineering professors paid much attention to it. Then political battles began over the world's oil supply and people started looking for better ways to generate power from coal.

"The solutions of the 1920s would no longer work in the 1980s. We needed to find a way to burn coal in an environmentally conscious age," Levenspiel said.

Levenspiel's book was important because it brought together some revolutionary theories about making solids such as coal behave like liquids. While the coal is being turned into a fluid, it also is cleansed of harmful substances by the limestone that is tossed around in the same bed.

"It looks kind of like popcorn popping. The coal floats in air in a bed full of limestone. While the energy is being produced, it's also becoming pollution-free," Levenspiel said. The harmful sulfuric acid and nitrogen oxide are purged. Nitrogen oxide stabilizes smog, while sulfuric acid brings about "acid rain" that eats away metals and mortar and is harmful to lakes and rivers, he said.

In present coal plants, coal has to go into a separate chemical plant to be cleansed, he said. That's very expensive but necessary to meet environmental guidelines. Levenspiel added that it's the coal from the East Coast, not the West Coast, that pollutes.



Professors paid much over the world's oil ways to generate

work in the 1980s. an environmentally

because it brought out making solids coal is being turned substances by the bed.

he coal floats in air is being produced, said. The harm- ged. Nitrogen oxide s about "acid rain" arnful to lakes and

to into a separate at's very expensive delines. Levenspiel Coast, not the West

utility companies'



Octave Levenspiel's the theory for investigator Tom Fitzgerald, right, to test in

research arm called me and asked, 'How could we extend the ideas in your book to burning coal?'" Levenspiel said.

"The main thing I told him is that we need a lot of data to answer that. That was the beginning of our research project."

Then as much magic as science happened in the chemical-engineering building at Oregon State University, Levenspiel said. The right people were drawn together at the right time.

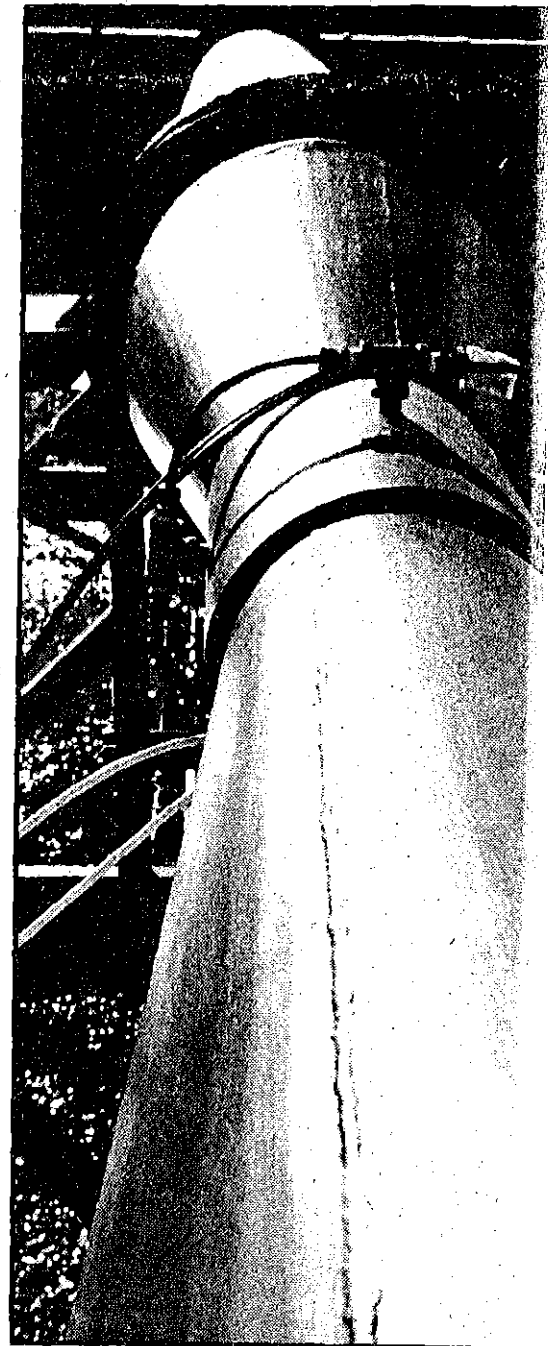
Levenspiel, the theorist, teamed up with Tom Fitzgerald, a fellow chemical-engineering professor. Fitzgerald provided his knowledge of electronics. He is the one principally responsible for the electronics and instruments needed to develop the fluidization process to the point where it could be used effectively in power plants.

Some of the instruments used in the Oregon State University work have found some surprising new industrial homes. A metal-detection instrument has been adapted to make airport security more effective. Another instrument prompted TRW Inc., the company that built the probe to take soil samples from Mars, to invite the university to work with it in developing some new instruments.

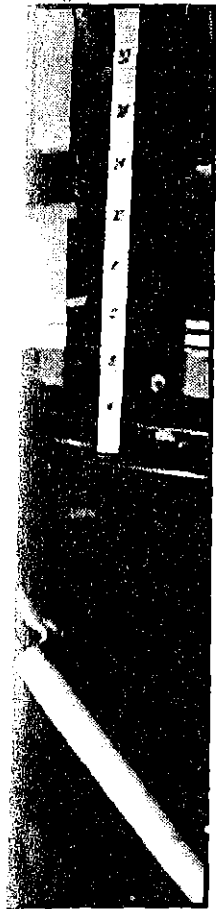
The coal-fluidization research project has multiplied in other ways, too. Now at least eight professors and 22 students in chemical engineering and mechanical engineering at the university have worked on some aspect of the basic research problem.

The most recent indication of the project's success came last fall when Oregon State University learned that the Tennessee Valley Authority will build a demonstration power plant in the Southeast using the process that the researchers have helped develop. The \$85-million plant will be only one-tenth the size of a commercial plant like the one in Centralia, Wash., Fitzgerald said. If it works, the next stage will be to build a slightly bigger plant, and finally a full-size one for power production.

Now that the research project has brought in nearly \$2 million in grants, Levenspiel and Fitzgerald can enjoy the irony of an earlier rejection. Just three years before the utility companies contacted Levenspiel about his research, the National Science Foundation said it couldn't fund a similar project because coal-related research was a thing of the past.



Rooftop 'Ve



manager ner keeps e coal bed ing order.

...the workers' compensation department, for willfully violating the Oregon Safe Employment Act. The fine was levied against Aqua Sand & Gravel Feb. 26, following the serious injury of an employee Feb. 21 in a Salem cave-in. Division spokesman said an safety compliance officer inspected the trench Feb. 1 as a result of a complaint about working conditions. The workers stopped work in the trench until it was properly shored. Work resumed in the trench Feb. 5. Following the employee injury, a safety inspection was conducted by the APD on Feb. 26. At this time," said the spokesman, "our compliance officer found the shoring inadequate, and in violation, after the trench had received specific prior shoring about safety conditions in the trench."

...nal of Commerce photo by Jim Knight Photography.)
 PORTLAND JOURNAL
 OF COMMERCE 4-11-80

POLLUTION STOPPED

Coal burning probed at OSU

The state of Oregon has very little coal.

But research by Oregon State University promises to help bring big advances in the use of coal as a major energy source in a new generation of giant power plants in the 80s, 90s and 2000s.

OSU chemical engineers are convinced that any kind of coal — including high sulfur types — can be burned in an "environmentally acceptable" manner.

"Air pollution problems are essentially eliminated in the fluidized-bed process that we have been working on. That takes away the major roadblock in the widespread use of abundant coal resources," says Professor Thomas J. Fitzgerald.

He has headed the research team whose work has taken five years and has cost \$1.5 million. Most of the work has been done on the Corvallis campus; some at the Morgantown, W. Va., Energy Technology Center, which is in the nation's coal country.

Research funds

Funds for the research have come from the Electrical Power Research Institute and the U.S. Department of Energy.

Other members of the research team have included Professors Octave Levenspiel, Robert V. Mrazek, Dwight J. Bushnell and David C. Junge, and Stephen Crane, research assistant and project manager.

A bed of limestone in the coal-burning chamber absorbs the hazardous sulfur dioxide fumes that have made coal an industrial no-no or villain in many parts of the world, Fitzgerald explained. "And the fluidized bed process burns coal at half the temperature of conventional coal-fired plants. The lowered temperatures keep the harmful smog-producing nitrogen oxide from developing."

Professor Levenspiel, who won the nation's top award this year for chemical reaction engineering, likens the combustion process in the OSU designed fluidized-bed to flaming popcorn that's being roasted in a screen wire container over a fire.

"The burning coal floats in air in a bed full of limestone."

Steel tubes for heating steam are immersed in the bed where the coal is burned. The steam runs turbines that generate electricity.

Fluidized bed

OSU didn't invent the fluidized bed coal combustion process. That's been in existence for 50 years, it was noted. But Levenspiel was the one who showed in 1969 how to design fluidized bed reactors, including coal burning units.

In 1975 when the energy crunch was being felt around the world, Fitzgerald and Levenspiel received a \$365,000 contract to start studies on improved ways of burning coal to generate electricity. That grant came from the Electrical Power Research

Institute. It has been followed by continued funding from the electrical industries and the U.S. Department of Energy.

An investment of \$1.5 million in research is "tiny" in comparison with the \$1 billion that's involved in the construction of a single coal-fueled power plant, Fitzgerald noted. Price tags on environmental concerns run high too, he added.

This is a project in which energy production and environmental concerns are compatible, the researcher added.

"This project gives us maximum energy return from the use of coal — any kind — while minimizing the impact on the environment. 'Clean' coal plants are not out of the realm of possibility any more."

Coal is not the only thing that can be burned in the fluidized bed process, it was emphasized.

"In addition to burning impure coals, they could also handle — with some slight modifications — tar sands, oil shales, wood wastes, garbage and almost any other solid," Fitzgerald pointed out.

FESTOONI
 by AER

Electric Cable Reels



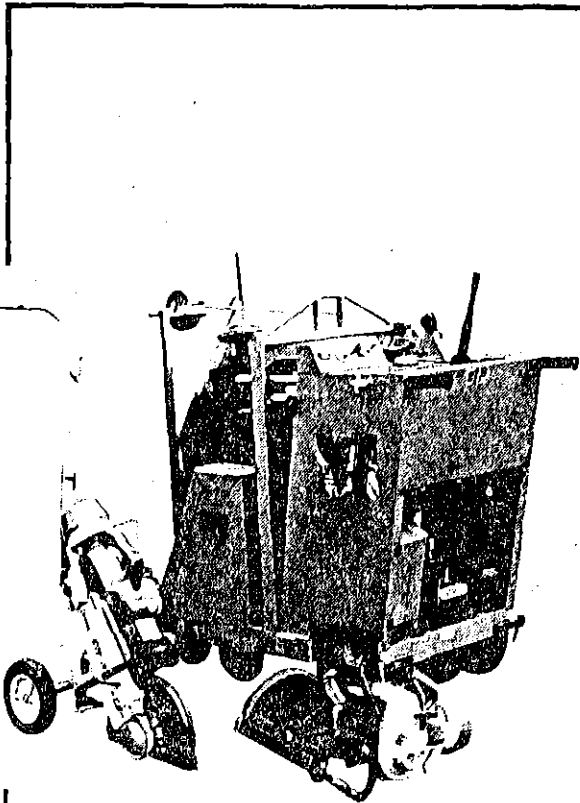
"General Tool"

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New Order Index continues decline for February

CLEVELAND — February's New Order Index, a two-month moving average...

REVIEW & OUTLOOK

WSJ 6-30-80
Acid Rain

Environmentalists are abuzz about acid rain. Ecology groups are lobbying for tight pollution restrictions in hopes of curbing acidic rainfall, and the Environmental Protection Agency took its first policy steps in this area last week by requiring two Ohio power plants to cut their output of certain emissions. But the problem in all this is that the nature of acid rain is unclear. No one yet knows precisely what causes it or what effects it has on the environment.

Rain and snow are normally slightly acidic due to the reaction of evaporated water droplets with carbon dioxide in the air. But rain falling on much of the Northeast and Scandinavia is now more acidic than that expected from natural causes. To date, the scientific explanation for this is sketchy.

Besides carbon dioxide, acidity in rain is usually derived from sulfuric and nitric acids. The exact composition, however, varies depending on locality, season, meteorological conditions and other factors, says the Electric Power Research Institute, which is conducting a major study of acid rain. These two acids are products of reactions involving sulfur dioxide, nitrogen oxides and water, and these gases are normally associated with the combustion of fossil fuels. For this reason, EPA is targeting its regulatory efforts at coal- and oil-fired power plants and other industrial users of fossil fuels. But anomalies in this thesis abound.

Acids are also produced by wood and refuse burning, automobiles, the rotting of plants, ore smelting, dust and debris swept into the air, sea spray and volcanic activity. No one has yet made a guess, for instance, about what effects the eruption of Mount St. Helens will have on rainfall acidity.

The National Coal Association says it is difficult to find a direct link between increased coal burning and higher rainfall acidity. Little, if any, more sulfur from coal is being placed into the atmosphere now than in the late 1940s since there now is greater use of low-sulfur coal and scrubbers in power plants. It also notes that sulfur dioxide emissions in Europe have risen by about 35% since 1965, but the rainfall in Sweden, which is downwind of major power plants, has shown a fairly level trend in acidity. Moreover, EPRI notes, sulfur dioxide emissions over the Adirondacks may vary by only 10% over a given period while acid concentrations may change by a factor of 10 from one rain to the next.

Higher levels of rainfall acidity are being found in quite unexpected areas. The Lower Mississippi Valley has experienced a rise in rainfall acidity that cannot be linked with the burning of fossil fuels because the predominant winds come off the Gulf of Mexico. Colorado also has highly acidic rain, though the prevailing winds come in over uninhabited areas devoid of power plants. Even the island of Samoa reports higher levels of rainfall acidity.

In the U.S., data on acid rain measurements over an extended period at the same sites are in short supply. From the mid-1950s to the early 1970s, only two such stations were maintained. At one site, rainfall acidity increased; at the other, it decreased. Europe has conducted more extensive studies into acid rain over a lengthy period, but even these data are not conclusive and more studies are needed.

It is known that sulfur and nitrogen oxides travel over long distances. But what winds are needed to transport the pollutants that far and what chemical changes they undergo during the journey remain unknown, EPRI states. Another important factor to consider, it says, is the probability that only a limited amount of air pollutants can be incorporated into a water droplet; thus, once exceeding some minimum level, rain acidity may be unaffected by the atmospheric concentration of pollutants.

As to the effects of acid rain on the environment there is also insufficient information. Some scientists blame acid rain for the disappearance of fish from some lakes. But, EPRI says, fish have disappeared from some lakes receiving acid rain, though in other lakes receiving similar rainfall fish have thrived. Several factors could be at work such as seepage from surrounding forests and soils, the reaction from fertilizers or even the composition of the lake-bed.

"There's still a lot we don't understand" about acid rain, EPA administrator Douglas Costle conceded last April. But he said EPA was still determined to move ahead with regulations in this area. EPRI says that at least five more years of study is required to identify correctly the causes and effects of acidic rainfall. Precipitous regulatory action by EPA could cost utilities and other industries billions of dollars. Until more is genuinely known about acid rain, these expenditures may end up only going down the drain.

A Matter of Opinion

Opinion pollsters have known for a long time that one of the problems of their craft lies in designing questions that are essentially neutral, that won't lead the witness, so to speak, to give a predictable answer. It's a very difficult trap to avoid, but it's also possible that pollsters could try a bit harder, or at least be more careful in qualify-

How would the results have turned out, we wonder, if the question had been phrased this way: "Which would you prefer—effective price competition associated with some unemployment in non-competitive industries or federal interference with competition that would result in higher prices and a higher level of unemployment in the

Manager's
Journal

Freedom of Information

WASHINGTON—Nearly 14 years ago the House of Representatives voted unanimously for what has come to be known as the Freedom of Information Act. The lawmakers tried to outdo each other in praising its merits.

Illinois Republican Donald Rumsfeld, in his then-fashionable crewcut, took the microphone to promise that the bill's passage "will be an investment in the future; an investment which will guarantee the continuation of our free systems guided by the people."

The new law ordered the Executive Branch to make its documents available to

By Arlen J. Large

The author is a member of the Journal's Washington bureau.

anyone who asked for them, unless the information dealt with such exempted matters as defense secrets, files that would impinge on personal privacy, commercial secrets disclosed to the government by business, and the like. Sponsors anticipated the law would be used mainly by the press in exposing the furtive doings of the federal bureaucracy.

It hasn't really worked out that way. News reporters do indeed use the law, occasionally; so do Nader-type public interest groups; so do people wanting to see what the FBI or the IRS has on them. But the big day-in, day-out requesters of information are business corporations. Corporate managers have learned to use the law both offensively, in getting information on business competitors or in fights with the government, and defensively in trying to keep outsiders from seeing their own secrets.

Traffic in corporate requests for official documents is especially heavy at the Food and Drug Administration. Officials say more than 85% of the 33,000 formal requests received annually come from industry; queries from news people amount to less than 2%.

The corporate requests often are a perfectly legal form of industrial espionage. When the FDA routinely inspects a drug company's manufacturing plant, other drug companies ask to see the inspection report in hopes of learning something about the competition's processes and costs. A company thinking of marketing a new drug will ask for a list of similar drugs already on the market.

"I think that's good," says Wayne Pines, the FDA's associate commissioner for public affairs. "It avoids duplication in drug research."

In this respect the Freedom of Information Act has turned out to be "an investment in the future" that former Congressman Rumsfeld couldn't possibly have foreseen. He is currently president of G.D. Searle & Co., a Skokie, Ill., drug company that over the past year has made nearly 200 requests to see FDA documents ranging from plant-inspection reports to internal agency memos and minutes of meetings.

These requests by Searle and other drug companies are themselves a matter of public record, so that a company that has given information to FDA on its own activities is able to know who's asking to see it. But that's not always true, because of a thriving little side-industry that has sprung up around the administration of the Freedom of Information Act itself.

FOI Services Inc., is located close to the FDA's own headquarters in suburban Rockville, Md. For a fee, the company will make a freedom of information request on a client's behalf, thus masking the client's

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Old Ice Indicates Acid Was Present In Rain Long Ago

WSJ * * * 9-19-80
Scientists' Findings Question
Idea That Polluted Rain
Is an Industrial-Age Woe

By MITCHELL C. LYNCH
Staff Reporter of THE WALL STREET JOURNAL
BOSTON—Acid rain, a recent concern of environmentalists, has been pelting the earth for centuries, according to findings by two University of New Hampshire scientists.

The scientists pulled ice core samples from glaciers in Antarctica and the Himalayan mountains and found them laden with acid. One core dated back 350 years.

The findings bring into question the idea that acid rain is an industrial-age problem that is primarily a result of man-made pollutants, particularly chemicals blown into the air from burning coal. Scientists say the findings likely will have more political and economic impact than scientific impact because laboratory researchers long have believed that acid is a natural part of rain.

What still is in dispute, scientists say, is how much acid the chemicals that are sent aloft by man add to acidity of rain. "Man's contribution still is significant," says Jeremy Hales, director of a government-subsidized study of chemical fallout in rain.

These types of studies were prompted by the growing issue that acid rain is ruining lakes and streams in the U.S., Canada and Scandinavia. Representatives of major industrial nations met last November to find ways of easing the problem through mutual cooperation. And the U.S. and Canada have been bickering about chemical fallout raining on each other's waterways and forests.

The University of New Hampshire scientists, Pauly Mayewski and W. Barry Lyons, extracted the ice core samples while on National Science Foundation studies of the relation between glaciers and the changing paths of monsoons. Last winter they collected 80 samples from Antarctic glaciers and last month 250 samples 10,000 feet up in the Indian Himalayas.

The ice hasn't melted in either place for thousands of years and volcanos haven't occurred in that time, the scientists said. Mr.

Mayewski is a glaciologist and Mr. Lyons a geochemist.

In determining the acid content, the scientists measured what is known as the pH factor. The lower the pH value, the less alkaline and the more acid. A pH value of 5.6 is considered acceptable, and a value of 7.0 is pure water.

The Himalayan samples, though, had readings as low as 4.8 and averaged 5.1. Even the freshly fallen snow, in an area far enough away from civilization to be considered pristine, showed readings of 5.1 on the pH scale. Further, some 30-year-old samples had the same reading from bottom to top, indicating that acid hadn't surged in recent years.

In Antarctica, some samples were 350 years old and had mean pH values of 4.8 to 5.0. The sulfate levels of the samples also were low. Sulfate is an indicator of pollution from fossil fuels such as coal and oil.

The Adirondack Mountains, the Upstate New York range that gets the flow of pollutants from Canada's southern Ontario industrial belt, has recorded pH levels as low as 4.0 to 4.5. Generally though, the pH is higher.

Fred Gray Withdraws As Judge Nominee; Another Black Named

By a WALL STREET JOURNAL Staff Reporter
WASHINGTON—Fred Gray, one of the South's best-known black civil rights lawyers, asked President Carter to withdraw his nomination to a federal district judgeship in Alabama. The President promptly nominated another black, Myron Thompson, to the vacant seat.

Mr. Gray's controversial nomination had been stalled in the Senate Judiciary Committee since early summer, following confirmation hearings at which representatives of the American Bar Association and other witnesses attacked the nominee for alleged financial improprieties while in private practice.

French Steel Firm Cuts Output
PARIS — Societe Usinor-Dunkerque, a French steel producer, said it will cut steel output 20% in September and October due to dwindling orders.

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announcement appears as a matter of record only.

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Lane County recommends support of the coal standard. The City of Eugene comments that the DEQ proposal contains insufficient information to evaluate if the lowered sulfur and volatile levels would result in reduced carcinogen emissions and if the resulting particulate levels would be acceptable in all areas. The City recommends support, conditional upon resolution of the above concerns. The L-RAPA Board of Directors supports the proposed standard, commenting that it is preventative in nature and is consistent with L-RAPA's philosophy of preventing rather than correcting air pollution problems.

L-COG comments that the proposed standard is clearly consistent with adopted areawide plans to minimize adverse impacts on air quality (Metropolitan Plan, Environmental Resources, Goal 4: "Provide a healthy and attractive environment for the metropolitan population."). Standards on the volatility and sulfur content of fuel would undoubtedly help minimize air quality problems in the area. However, the carcinogen problem may not have been adequately covered, and subsequent regulation may be needed. L-COG supports sulfur and volatility standards on coal used for residential space heating.

REGIONAL CLEARINGHOUSE REVIEW AND COMMENT CONCLUSIONS

Applicant Dept. of Environmental Quality By: Gail Kelly
P.O. Box 1760 Clearinghouse Coordinator
Portland, OR 97207

Telephone: 687-4283

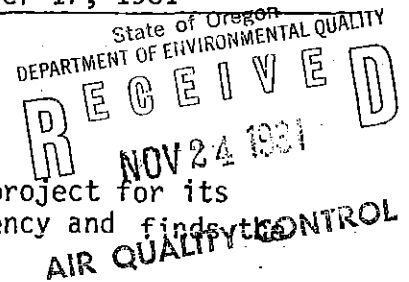
Project Title: Proposed Coal Content
Standard

Date: November 17, 1981

PNRS SUMMARY

FORMAL APPLICATION

OTHER



The L-COG Regional Clearinghouse has reviewed the proposed project for its relationship to existing plans, goals, or policies of this agency and finds the proposal to be:

- It is consistent with or contributes to areawide planning.
- Consistent, pending resolution of concerns noted in comments included.
- It is inconsistent with areawide planning.
- Request the opportunity to review the full application.
- No comment.
- Professional comments are included.

For A-95 Reviews Only:

- Recommend approval.
- Do not recommend approval.
- Recommend approval, conditional on resolution of concerns included.
- No comment.

For Environmental Assessment (if attached):

- Negative declaration is consistent with information presented.
- Environmental assessment is adequate.
- Environmental assessment is not adequate for the following reasons.
- Impacts exceed established environmental standards referenced.

L-COG REVIEW COMMENTS

Please refer to the attached comments.

Note: L-COG has received review comments from the Lane County
following local agencies which have been L-RAPA
incorporated into this summary: City of Eugene

A-95 review comments should not be considered as a substitute of required permit or license procedures necessary for projects or programs. Nor does this review system waive regularly required performances standard reviews.

Copy to: Kay Wilcox, I.R.D.

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Due to high cost of fuel
It's the only way to keep

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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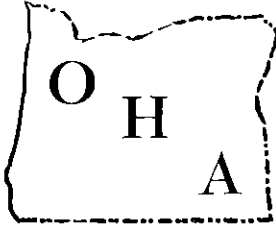
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Jerald R. Smith

Jerald R. Smith
AIR QUALITY CONTROL
7633 SE Henderson
Portland, Or 97206

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OREGON HOMEOWNER'S ASSOCIATION

2212 S.E. Lambert
Portland, Oregon 97202
Phone: Area Code (503) 233-4841



October 22, 1981

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
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Department of Environmental Quality,
Box 1760,
Portland, Oregon, 97207

AIR QUALITY CONTROL

Messrs:

We had planned to be at the hearing, however, circumstances conflict with your called date November 17, 1981.

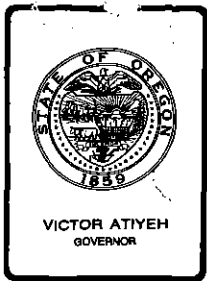
We want to thank you for sending the research data concerning coal and other fuels. Our home energy committee reports back that some of the data they understand, some of it they do not. Our Board of Directors, through our committee, have raised the following questions:

1. What is the estimated percentage of coal used in relation to the total residential units, i.e. electric, oil, natural gas, and wood.
2. Is the sulfur content any worse than the firing up of space heaters and fireplaces that use wood as a primary heating source.
 - A. If wood is to be a primary heating source, would the DEQ be looking at restricting the use of wood for residential use.
 - B. Are we looking to the future with restrictive use of building wood fireplaces.
 - C. Should this happen, this leaves only oil, natural gas and electric for residential heating.
 - (1) The only clean air product we can identify is electrical.
 - II. Oil is a shortage resource, but with natural gas, is now un-controlled in price. From this we reduce our thoughts down to the economic expense of the homeowner in relation to an un-controlled market possibly creating more inflation and higher demand for wages to pay the inflated heating bills.

3. We have very serious reservations as to whether entry into the home over the use of a particular heating product is in conflict with our constitutional safe guards. We will resist any idea that such compliance would grant DEQ any entry enforcement.

These are our basic concerns as a homeowner organization for the State of Oregon. You may reach us by phone at 233-4841 or at the above address or 8435 S. E. 17th Ave., Portland, Oregon, 97202.

Thank you,
Clyde V. Brummell
Oregon Homeowner's Association
Clyde V. Brummell, Chairman.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. K, January 22, 1982, EQC Meeting

Adoption of Amendments to the State Photochemical Oxidant Ambient Air Quality Standard (OAR 340-31-030) As a Revision to the State Implementation Plan.

Background and Problem Statement

Since the Environmental Protection Agency revised the national ambient air standard of ozone upward in 1979, the Department of Environmental Quality has collected considerable public testimony on a similar revision of the state standard. The Environmental Quality Commission first authorized public hearings to consider revision of the state standard in 1979 and the hearings were held in May of that year. Later that year, the Environmental Quality Commission, after hearing testimony opposing the proposed revision, voted to retain the state standard of 0.08 ppm ozone.

The issue surfaced again in November 1979 when the Environmental Quality Commission authorized informational public hearings which were held in August, 1980. As a result of testimony received during those hearings, the Department requested and received authority to conduct formal public hearings to gather testimony on revision of the state's standard. These hearings were held on November 18, 1981 in Portland and November 23, 1981 in Medford. The Notice of Public Hearing (Attachment 1) for these latest hearings, indicated that testimony from previous hearings would be included in the record.

Of the twenty-seven persons or groups presenting testimony at the last hearings, nineteen indicated they did not wish the standard changed. Little new testimony supporting either viewpoint was gathered during the hearings. The Hearings Officer report and the Department's comments are included as Attachments 2,3,4 and 5. The Hearings Authorization report with a more detailed background is included as Attachment 6.

Authority to Act and Statement of Need for Rulemaking

The Authority to Act and Statement of Need are included with this report as Attachment 7.

Alternatives and Evaluation

Three basic alternatives exist for consideration of the Commission. They are as follows:

- 1) Adopt a new state primary and secondary standard of 0.12 ppm as ozone in order to be consistent with the federal standards.
- 2) Direct the Department to convene a Health Effects Committee to study the available information and propose a new state standard.
- 3) Retain the present state standard of 0.08 as ozone.

The consequences of adopting the above alternatives are as follows:

- 1) Adoption of the proposed standard would provide uniformity between state and federal standards and allow final resolution of future control requirements and growth margins.
- 2) A Health Effects Committee review of available studies would result in further delays in finally establishing a state standard, control strategies and growth margins and may likely end up in no majority position on the matter.
- 3) Retention of the current 0.08 ppm state ozone standard would ultimately require changes in control strategies and growth margins already developed or nearly developed for the 0.12 ppm standard. Also, EPA has indicated that it would not supply funds for transportation control plans to attain a standard below the federal standard so additional control planning costs would rest entirely within the state.

Discussion

The problem of defining a threshold effects concentration for ozone has been the subject of considerable study and debate. As a consequence, many health effects studies have been conducted on both human and animal subjects, using short and prolonged exposures. Some of these studies have produced conflicting results on either the effects of ozone at various exposure levels or the levels at which measurable or noticeable effects occur. As an example, one report suggests decreased performance in athletes exposed to as little as 0.067 ppm ozone while another study produced no measurable or noticeable effects below 0.20 ppm.

In health effects studies, two criteria appear to be important: demonstration of a statistically significant and measurable effect free from artifacts or the experimental protocol and repeatability of the experiment by other researchers in the field.

Testimony gathered at the public hearings conducted in the state during the past two years demonstrates that an effects threshold for ozone exposure is difficult to define by scientific experiment. Despite the apparently conflicting study reports, the EPA arrived at a standard of 0.12 ppm, a level at which it felt human health would be adequately protected with a reasonable risk factor and safety margin. EPA's decision was challenged in court by the National Resource Defense Council and in September, 1981, the court reached a decision on the case in favor of the EPA decision. The court apparently recognized the disparity in reported threshold effects but stated that it felt EPA was not arbitrary or capricious in setting the 0.12 ppm standard. The court also supported the use of risk assessment in standards setting where there is no clear definition of the threshold effects level.

Analysis of the studies referenced in the testimony yields a situation similar to the dilemma EPA faced in setting the federal standard, i.e., conflicting reports on effects and threshold levels and nonreproducibility of low level effects experiments. However, in spite of these difficulties, EPA did define a standard which they felt was sufficient to protect public health and their decision has withstood testing in the courts.

Now, two years after the federal standard was established, Oregon is faced with the same decision. Some studies have appeared since the EPA decision but for the most part, the reports show the same disparities as the previous studies so it appears that while more data may now be available, there still appears to be no clear evidence which justifies a standard below 0.12 ppm ozone. Since the federal standard was set with essentially the same information as is currently available and that standard was upheld in a court challenge, the state should adopt a standard for ozone at the same level.

Finally, should the state ozone standard be revised to 0.12 ppm, the alert level for ozone in the air pollution episode plan which is currently 0.1 ppm should also be changed to be consistent with the new standard. A specific alert level is not a federal requirement but it should reasonably be a level greater than the standard. A figure of 0.20 ppm is often suggested as the appropriate alert level corresponding to a 0.12 ppm standard. However, since there is concern by some people, health advisories could be issued by the Department at the standard level if desired by the Commission. In the announcement of public hearing the reference to changing the alert level was improperly cited and there was no substantial testimony or discussion at the public hearings concerning establishing a new alert level for ozone. A complete revision of the Emergency Action Plan regulation containing the alert level is being drafted for consideration this Spring. Consideration of the change in the

alert level could be taken up when the entire emergency action regulation is considered in March, 1982.

Summation

- 1) EPA and most recently the District of Columbia Court of Appeals has concluded that an ozone standard of 0.12 ppm is adequate for protection of public health. Following a review of available data and expert testimony, the Department has found no significant reason to disagree with the above conclusion.
- 2) No supportable evidence was presented in testimony taken at the public hearings in support of retention of the 0.08 ppm standard for ozone.
- 3) Resolution of the state ozone standard needs to be made in order to solidify control strategies and growth margins.
- 4) The state alert level should be changed to 0.20 ppm as ozone to coincide with the recommended federal level. Health advisories can still be given at the standard (0.12 ppm) level as a matter of public information.
- 5) The proposed change in the alert level for ozone in OAR 34-27-010 was inadvertantly given an incorrect reference in the notice of hearing. This topic should be considered in March, 1982 with other changes to be made in the emergency action regulation.

Director's Recommendation

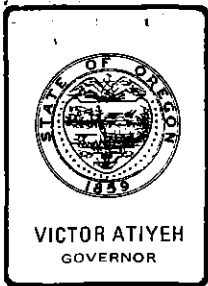
Based on the Summation, it is recommended that the Commission adopt 0.12 ppm ozone, 1 hour average, as the state's ozone standard (Amended OAR 340-31-030).

Bill

William H. Young

- Attachments:
- 1) Notice of Public Hearing
 - 2) Hearings Officer Report for Nov 1981 Hearing
 - 3) Department Comments on Testimony Received at Nov 1981 Hearings
 - 4) Hearings Officer Report for August 1980 Hearings
 - 5) Department Comments on Testimony Received at August 1980 Hearings
 - 6) Staff Report for Hearings Authorization October 1981
 - 7) Authority to Act and Statement of Need
 - 8) Proposed Rule

S.L. Erickson:a
AA1648 (1)
229-6458
December 17, 1981



Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

Prepared: 10/2/81

Hearing Date: 11/18 & 11/23/81

NOTICE OF PUBLIC HEARING

A CHANCE TO BE HEARD ABOUT:

PROPOSED CHANGES IN THE AMBIENT AIR QUALITY STANDARD FOR PHOTOCHEMICAL OXIDANT

Information developed since the photochemical oxidant standard was adopted by the Environmental Protection Agency (EPA) in 1970 indicates that changes in the standard should be considered. EPA has adopted a new standard substantially higher than the present state standard. Subsequently, a suit was filed against EPA concerning the appropriateness of the new standard. The court has since rendered a decision upholding EPA's actions in setting the standard. The Department of Environmental Quality (DEQ) has reviewed the evidence presented by EPA, and is proposing changes in the state standard to make it consistent with the federal standard.

WHAT IS THE DEQ PROPOSING:

Interested parties should request a copy of the complete proposed rule package. Some highlights are:

** DEQ proposes to adopt the new federal ambient air quality standard of 0.12 ppm ozone, one hour average, as a state primary and secondary standard.

WHO IS AFFECTED BY THIS INFORMATION:

To some extent, all persons in the state, but particularly those in the metropolitan areas where oxidant violations are common during summer months. Substantial economic impact may be associated with control program requirements.

HOW TO PROVIDE YOUR INFORMATION:

Written comments should be sent to the Department of Environmental Quality, Air Quality Division, Box 1760, Portland, Oregon 97207, and should be received by November 23, 1981.

Testimony presented at the informational hearing held in Portland on August 21, 1980, and Medford on August 22, 1980, will be included in the record for this formal public hearing.

Oral and written comments may be offered at the following public hearing;

City	Time	Date	Location
Portland	7 p.m.	November 18, 1981 Wednesday	Multnomah County Courthouse Room 602 1021 S.W. Fourth Avenue
Medford	7 p.m.	November 23, 1981 Monday	Medford City Hall City Council Chambers 411 West Eighth Street

WHERE TO OBTAIN ADDITIONAL INFORMATION:

Copies of the proposed rules may be obtained from:

Mr. Spencer Erickson
DEQ Air Quality Division
Box 1760
Portland, Oregon 97207
(503) 229-6458

You can call toll-free, 1-800-452-7813 and ask for DEQ.

LEGAL REFERENCES FOR THIS PROPOSAL:

This proposal amends OAR 340-31-030 and 340-27-020. It is proposed under authority of ORS Chapter 468, including Section 020, 295, and 900 and the Clean Air Act as amended (P.L. 95-95).

LAND USE PLANNING CONSISTENCY:

The Department has concluded that the proposals do affect land use.

With regard to Goal 6 (air, water and land resources quality) the rules are designed to enhance and preserve air quality in the affected area and are considered consistent with the goal.

Goal 11 (public facilities and services) is deemed unaffected by the proposals.

Public comment on any land use issue involved is welcome and may be submitted in the same fashions as are indicated for testimony in this NOTICE OF PUBLIC HEARING.

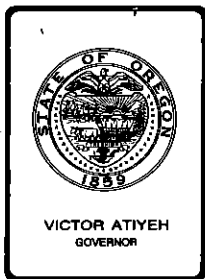
It is requested that local, state, and federal agencies review the proposed action and comment on possible conflicts with their programs affecting land use and with Statewide Planning Goals within their expertise and jurisdiction.

The Department of Environmental Quality intends to ask the Department of Land Conservation and Development to mediate any apparent conflict brought to our attention by local, state or federal authorities.

FURTHER PROCEEDINGS:

After public hearing the Commission may adopt rule amendments identical to the proposed amendments, adopt modified rule amendments on the same subject matter, or decline to act. The adopted regulations will be submitted to the Environmental Protection Agency as part of the State Clean Air Act Implementation Plan. The Commission's deliberation should come in January as part of the agenda of a regularly scheduled Commission meeting.

A Statement of Need and Fiscal Impact Statement are attached to this notice.



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Hearings Officer

Subject: Hearing Report on the State Ozone Ambient Air Quality Standard

Summary of Procedure

Commencing at 7 p.m. on Wednesday, November 18, 1981, a public hearing was held in Room 602 of the Multnomah County Courthouse, 1021 S.W. Fourth Avenue, Portland, Oregon, regarding a proposed change in the state ozone ambient air quality standard. A second hearing was held in Medford, Oregon commencing at 7 p.m. on Monday, November 23, 1981 in the City Council Chambers of the Medford City Hall, 411 S.W. Eighth Street. The oral and written testimony received at these hearings is summarized below. In addition, testimony received at the two information hearings held in August, 1980, in Portland and Medford, will be included by reference and the hearings officer report of those hearings is included.

Persons Presenting Oral and Written Testimony

Clyde H. Doctor	Multnomah County Executive Office
Charles Shade	Physician
Joe Weller	Oregon Lung Association
Allison A. King	Pacific Northwest Society for Coatings Technology
Genevieve P. Sage	Oregon Lung Association, Southern Region
Peter Sage	Commissioner, Jackson County

Persons Presenting Oral Testimony

Mark H. Gibbons	Citizen
Patricia Kuhn	Citizen
Kent DeYarman	Physician
Brad Studebaker	Citizen
Stewart Foster	Medford Chamber of Commerce

John Curtis	Citizen
Vera Morrell	League of Women Voters of the Rogue Valley
Liz Welt	Citizen
Ray Polani	Citizens for Better Transit

Persons Presenting Written Testimony

George W. Feldman	Physician
Carl H. Lawyer	Physician
Roger Burt	Citizens for Pure Water Citizens for a Lead Free Environment
Eleanor Ryan	Citizen
Ben and Elaine Reagan	Citizens
Richard Therres	Citizen
C.E. Stevenson	Citizen
June M. Stevenson	Citizen
Jim Sevich	Citizen
Carol M. Sevich	Citizen
Lowell Ludford	3M Corp
Bruce W. Morgan	Citizen
Larry and Margaret Loabs	Citizens
Bill Carlson	Southern Oregon Timber Industry
John Farquhar, Jr.	Physician

Summary of Testimony

Clyde H. Doctor presented testimony for Donald E. Clark, County Executive for Multnomah County opposing an upward change of the current state ozone standard. Mr. Clark feels that the citizens of Oregon have come to expect high environmental quality and Oregon has and continues to take the lead in environmental issues. Mr. Clark emphasized four points for consideration in his testimony: First, EPA studies have shown that Portland is uniquely susceptible to temperature inversions; second, that the current ozone standard have been exceeded numerous times in the past and people are uncomfortable if not physically ill when this happens; third, ozone is a toxic gas known to cause cancer, emphysema and increased risk of infection in animals and has been associated with chest disease and upper respiratory irritation in humans; and fourth, there are a large number of especially susceptible persons, i.e., children, elderly and chronically ill, in the Portland area.

Finally, Mr. Clark pointed out that while sufficient expertise may not be staffed by the Department to evaluate health effects studies, such experts are available in Oregon for consultation and he asked the Environmental Quality Commission to direct the Department to convene a medical/epidemiologic review panel to assess the health implications of raising the standards for ozone.

Dr. Charles Shade, Health Officer for Multnomah County and the City of Portland, presented testimony on his own behalf as a physician since

neither the Board of County Commissioners nor the City Council has taken a position on the subject. Dr. Shade opposes the Department's proposal to raise the state ozone standard based on his concern that the chronic effects of ozone exposure has not been sufficiently explored.

Dr. Shade cited four major reasons for his concern.

First, few, if any, large scale population studies of ozone effects on human health have been made. He cited a study by Detels (Detels, R; et al; "The UCLA Population Studies of Chronic Obstructive Respiratory Disease. I. Methodology and Comparison of Lung Functions in Areas of High & Low Pollutions," Am. J. Epidemiology, 109(1): 33-58, 1979) which indicated substained increases in pulmonary function abnormalities in persons chronically exposed to high levels of photochemical smog. Another study (Zagraniski, R.T., et al, "Ambient Sulfates, Photochemical Oxidants, and Acute Health Effects: An Epidemiologic Study," Environmental Research, 19: 306-320, 1979) showed a significant correlation between certain respiratory symptoms and photochemical oxidant levels in ambient air with a mean value of 0.08 ppm one hour exposure. Both of these studies were reported after the Environmental Protection Agency's change in the national ozone standard occurred.

Second, existing studies of ozone exposure effects use too few subjects to show significant effects at low levels. In statistics, two types of errors can occur in predictions of effects; type I, the error of concluding there is an effect when none exists and type II, the error of concluding there is no effect when one actually exists. In order for studies to produce a low probability of a type II error, a large number of cases may be required. Many of the studies, such as DeLucia and Adams, use rather small numbers of study subjects.

Third, many studies used by the Environmental Protection Agency are short-term, toxicologic, in nature, rather than long-term, epidemiologic. The effects of long-term chronic exposure to ozone needs fuller evaluation.

Fourth, ozone is a demonstrably toxic gas causing injury to lungs, arteries and nervous tissues. It increases risk of infection and cancer in animals. Proof of lack of injury should rest with those proposing less strict standards rather than require the proponents of retaining the stricter standard being asked to prove higher levels injurious.

Mr. Joe Weller of the Oregon Lung Association presented testimony opposing the proposed change in the state ozone standard. He pointed out that the Clean Air Act directs that standards be set to protect the most sensitive population with an adequate margin of safety without regard to cost benefit or achievability factors. Mr. Weller quoted from EPA Summary Statement On The Health Effects of Photochemical Oxidants published in January, 1978 as follows: "In reviewing the body of evidence on health effects, the Health Panel concluded that there is no compelling reason to suggest a change from the concentrations defined by the existing primary air quality standard, namely 0.08 ppm". The panel further states that there is a likelihood of a variety of adverse health effects at ozone levels of 0.15 to 0.25 ppm with some possibility of effects in concentrations as low as 0.10 ppm.

Dr. George Feldman presented testimony as a private physician opposing the

proposed standard revisions. Dr. Feldman cited the same publication as Mr. Weller concerning the EPA Advisory Panel's views on the 0.08 ppm ozone standard. He also cited an article by Dr. Bernard Goldstein of Rutgers Medical School indicating that the areas in which ozone is toxic include alterations in functions of mitochondria, morphologic and functional alternations of the lung, mutagenicity, potentiations of respiratory infection by as little as 0.08 ppm in mice, reactive airway disease, increased asthma attack and eye irritation

Dr. Feldman concludes that since public health is concerned, cost-benefit analysis should not be overly influential.

Dr. Carl Lawyer of the Thoracic Clinic P.C. presented testimony opposing raising the state's ozone standard. Dr. Lawyer cites several passages from Annals of Occupational Hygiene, Vol 15, 1972 and Ozone and Other Photochemical Oxidants, Natl. Academy of Sciences, 1977, regarding susceptibility of laboratory induced bacterial infections in mice exposed to 0.08 ppm of ozone for 3 hours, performance decreases in athletes exposed for one hour to 0.03 to 0.3 ppm (the effects threshold was estimated at 0.067 to 0.163 ppm), increased asthmatic attacks at 0.15 ppm short-term, and reductions in soybean and corn crops after chronic exposure to 0.05 to 0.15 ppm ozone for four to six hours per day.

Dr. Lawyer points out that 5 to 10% of Portland's residents will suffer from asthma sometime in their lifetime and he feels that air pollution, including ozone, can produce exacerbations of asthma and possibly have a role in its original cause, although no scientific proof exists of the latter.

Dr. Lawyer cites an article entitled Ozone & Other Photochemical/Oxidants by the National Academy of Science, 1977, which states that exposure to 0.1 ppm of ozone seven hours per day, five days per week produced incidence of neonatal mortality in litters of exposed parents. He also speculates that long-term exposure to ozone at low levels may produce bronchial asthma since ozone can also increase the sensitivity of the airway to bronchospastic agents such as histamine.

Due to differing sensitivity of laboratory mice to ozone tolerance due presumably to genetic variations, Dr. Lawyer speculates that there are subgroups of the human population in Oregon which are more susceptible to ozone. One study cited showed electron microscopic changes in airways and cilia in Vitamin E deficient rates after exposure to 0.3 ppm ozone three hours daily.

Dr. Lawyer concludes that in his opinion, raising the ozone standard to 0.12 ppm will probably contribute to respiratory disease in Oregon residents. Further, he states that such a revision in the standard should only be considered only after conducting long-term epidemiologic studies.

Ms. Allison King presented testimony for the Pacific Northwest Society for Coatings Technology in favor of revising the state's ozone standard to 0.12

ppm. Ms. King indicated that the member companies have indicated the 0.08 ppm standard is unsatisfactory because 1) the economic impact of compliance would be disastrous given the depressed economy, 2) no quantitative relationship between volatile organic compounds and ozone has been established and 3) studies have shown that ozone levels below 0.25 ppm produce no clinical effects.

Ms. King stated that, in their opinion, the proposed 0.12 ppm ozone standard will not cause significant deterioration in Oregon's air quality.

Ms. Liz Welt, a resident of Portland, presented testimony opposing the proposed increase in Oregon's ozone standard. Ms. Welt indicated that she also represented Ms. Thelma Wilder, a resident of Portland, who was unable to attend the hearing. Ms. Welt indicated that she felt the economic aspects raised by industry are not valid considerations in setting the ozone standard. She said that five years ago she could breath much better than she can today. She indicated that in her opinion, the financial burden to everyone would be greater than that required of industry if more pollution is allowed.

Mr. Ray Polani, a citizen of Portland representing Citizens for Better Transit, presented testimony opposing the proposed change in the state's ozone standard. Mr. Polani cited a publication available thru the Oregon Lung Association in the early 1970's entitled Air Pollution and The Human Body by David Bates. He stated that the effects of ozone on human tissue is cumulative and there is not sufficient information on the long-term effects of ozone.

Mr. Roger Burt, Co-Chairman of Citizens for Pure Water and Director for Citizens For a Lead-Free Environment, presented testimony opposed to the proposed increase in the ozone standard. In a brief letter, Mr. Burt states that the federal standard does not allow for the ability of ozone to cause smog.

Mr. Richard A. Therres, a citizen of Central Point, presented testimony favoring the proposed revision in the state's ozone standard. Mr. Therres feels that raising the ozone standard would prevent the Jackson County Commissioners from implementing a ban on wood space heating. He further feels that most of the smog in the Medford area comes from industries bypassing pollution control equipment after dark. Finally, he states that since orchard heating with smudge pots has been relieved, the air quality in Medford has improved.

Ms. Eleanor Ryan, a citizen of Central Point, presented testimony favoring the proposed ozone standard revision. Ms. Ryan stated that, in her opinion, the testimony given at the public hearing "were the most concerned about people with hearing and lung diseases". She pointed out that other matters, primarily economic considerations, must be taken into account.

Ben and Elaine Reagan presented as testimony a copy of Awake!, November 22, 1981, Watchtower Bible and Tract Society of New York, Inc. Several

articles in the issue dealt obliquely with pollution and none mentioned directly the issue of ozone or photochemical oxidants..

C.F. Stevenson, June Stevenson, Jim Sevcik and Carol Sevcik, citizens of Central Point, provided testimony favoring adoption of 0.12 ppm as the state's ozone standard. They feel that Oregon must attract new industry to overcome the current economic depression. In order to do this, they feel that our standard must be kept in line with the rest of the nation.

Mr. Bruce Morgan, a citizen of Medford, presented testimony opposing a revision of the state's ozone standard. Mr. Morgan stated that so many people in his neighborhood now use wood space heating that he is forced to wear a protective mask outdoors in the evening. He would urge the standard be revised downward to 0.06 ppm

Larry and Margaret Laabs, citizens of Medford, presented testimony favoring adoption of the federal 0.12 ppm standard as the state's ozone standard.

Dr. John Farquhar, Jr., a physician at the Childrens and Adolescents Clinic in Medford, presented testimony opposing a revision in the state ozone standard. Dr. Farquhar noted that there are questions in the literature concerning the safe level of ozone exposure, particularly in high risk populations such as asthmatics and children according to the EPA Advisory Panel on Health Effects of Photochemical Oxidants, January, 1978. He points out that the fiscal impact statement in the public hearing notice failed to consider increased (medical) costs to those high risk categories.

Mr. Bill Carlson of Southern Oregon Timber Industry presented a letter favoring the proposed ozone standard revision by reaffirming testimony given at an earlier public hearing on the issue.

Mr. Mark Gibbons, a citizen of Ashland, presented testimony opposing the proposed change in the state's ozone standard. Mr. Gibbons expressed concern for citizens and especially for those with heart related problems who exercise while being exposed to ozone. He cited both the EPA Advisory Panel and the DeLucia and Adams study as references depicting impaired respiratory function during ozone exposure. Additionally, the DeLucia and Adams study exemplified the magnification of effects of ozone. Mr. Gibbons advised that part of the program for heart patients at Providence Hospital included exercise at 70% of maximal and that ozone effects (chest tightening) due to ozone exposure make it difficult to differentiate from other effects due to their heart condition.

He feels that the current standard offers a more comfortable margin of error, based on the EPA Advisory Panel statements, than would the proposed 0.12 ppm standard.

Ms. Patricia Kuhn, a citizen of Medford, offered testimony opposing the proposed change in the ozone standard. Ms. Kuhn stated that intense lobbying by the American Petroleum Institute was the reason the issue of a revised ozone standard was once again raised after it had been settled

earlier. She felt that Oregon should continue to lead the nation in setting environmental standards and that the issue of economics should not be considered. Further, she stated that merely because earlier studies showing low level effects of ozone could not be repeated, she felt that they should not be discounted.

Ms. Genevieve Sage of the Southern Region of Oregon Lung Association, presented testimony opposing the proposed ozone standard revisions. The Oregon Lung Association believes that the 0.12 ppm standard is not adequate to protect public health, does not contain the required margin of safety and was set contrary to the Clean Air Act's requirements for primary standards. She indicated that ozone causes irritation of the mucous membranes causing coughing, choking and impaired lung function. It also aggravates chronic respiratory disease such as asthma and bronchitis and reduces resistance to respiratory infections.

Ms. Sage cites the Summary Statement of the EPA Advisory Panel concluding that there is no compelling reason the 0.08 ppm standard be revised and there was more epidemiological evidence supporting the 0.08 standard than when it was established. Furthermore, since incorporation of the calibration change in 1979, the new 0.12 ppm federal standard is in reality a 0.14 to 0.15 ppm standard. Thus a standard of 0.12 ppm would allow nearly twice the ozone as the 0.08 ppm standard.

Ms. Sage indicated that the reason DEQ proposed the relaxation of the ozone standard was cost of control measures but the Clean Air Act directs primary standards to be set without regard to cost. Economic considerations should be taken into account only in strategy development.

Dr. Ken DeYarman, a physician in Medford, presented testimony opposing the revision of the state ozone standard. He indicated that the effects of ozone are easily demonstrated under laboratory conditions and that irritation of the eyes and respiratory tract can be seen. Further, 15-20% of the population is not normal with regard to ozone susceptibility. Dr. DeYarman stated that other studies have shown that sensitivity to ozone can be increased in the presence of other pollutants and exercise.

Mr. Brad Studebaker, a student at Southern Oregon State College, presented testimony opposing a revision in the current state ozone standard. Mr. Studebaker feels it would be irresponsible at this time to raise the standard because the threshold for adverse health effects is not clearly defined and there are adverse effects below 0.12 ppm. He also felt it was important not to consider economic burdens in setting the standard.

Finally, he stated that even though the testimony given by physicians at this hearing was not sensationalized, their testimony should be regarded closely.

Mr. Peter Sage, Jackson County Commissioner, presented testimony opposed to revising the state ozone standard. Mr. Sage indicated he felt that the 0.08 ppm standard was very reasonable and achievable in Southern Oregon,

that the citizens of Jackson County would support strategies to meet the current standard, that DEQ is giving in to industrial lobbying, that the proposed revision is politically rather than scientifically based and that county growth depends on providing a clean environment.

In a letter to Bill Young presented at the hearing, Mr. Sage states that Jackson County is facing some very difficult clean-up measures and support by state and federal government is essential to these efforts. He feels the citizens of Jackson County view the proposed revisions of the ozone standard as a way out for industry and relaxation of that standard may be a prelude to relaxing other standards such as for particulate or carbon monoxide and that relaxing the standard will jeopardize public support for other programs such as I/M and woodstove controls.

Mr. Stuart Foster of the Greater Medford Chamber of Commerce presented testimony in favor of the proposed 0.12 ppm standard. Mr. Foster referenced a study conducted in 1979 by Marquess and Associates wherein a comprehensive study of the effects of the Clean Air Act on the Medford AQMA was made. One of the conclusions of the study was that insufficient data existed to justify Oregon adopting an ozone standard different from the federal standard.

He feels that proponents of an ozone standard stricter than the federal standard should offer scientific evidence that such a standard is necessary and since that data is not available, Oregon should adopt the federal standard. Mr. Foster stated that the Chamber of Commerce did not feel a different secondary standard was justified either.

Mr. Foster questioned the ability of the AQMA to achieve the current state ozone standard due to substantial questions regarding transport of pollutants and the level of background emissions as opposed to violations due to local sources.

Mr. John Curtis, a citizen of Eagle Point, presented testimony opposing the proposed revision of the ozone standard. Mr. Curtis presented only oral testimony which was largely unintelligible on the tape recording made of the public hearing.

Ms. Vera Morrell of the League of Women Voters of the Rogue Valley presented testimony opposing the proposed revision of the state ozone standard. Ms. Morrell indicated that the testimony she gave at the informational hearing in August 1980 are still relevant. She said that a recent Harris Poll conducted proved that the American people do not want the environmental standards relaxed.

Mr. Lowell Ludford of 3M Corporation presented testimony favoring the proposed revision of the state ozone standard. 3M has submitted written testimony in May 1979 and August 1980 in connection with the proposals to revise the state ozone standard and now has submitted further testimony to provide and comment on more recent information. The state of Minnesota is proposing to revise its ozone standard upward from the current 0.07 ppm and

has elicited extensive testimony from several experts in the field of pollution health effects including Dr. Jack Hackney of the Rancho Los Amigo Hospital in Downey, California and Dr. Phyllis Mullenix of Harvard Medical School.

Dr. Hackney referenced a 1977 study by Van Nieding of West Germany that reported decrements of oxygenation in subjects exposed to as little as 0.10 ppm ozone. He reported an unsuccessful attempt to duplicate the study results at even double the exposure level of ozone.

Dr. Hackney also commented on the DeLucia and Adams study of 1977 indicating that in his opinion, insufficient data was available to make the reported health effects at 0.15 ppm scientifically reportable. He also said the reported symptoms may have been due to chance or some other aspect of the experimental protocol other than ozone.

Reference was made to several studies that had attempted to identify synergistic effects of ozone with other pollutants including studies by Hazucua and Bates (1975), Kagawa and Tsuru, Bedi (1979) and Bell (1977). According to Dr. Hackney, the Bell study had the best atmospheric control and both the Bell and Bedi studies showed negative or slight enhancement. Another synergistic study mentioned which showed little enhancement of ozone effects in the presence of SO₂ or sulfuric acid was Kleinman (1980).

Addressing the questions of sensitivity variations to ozone in certain groups of people (asthmatic, children, elderly, etc.), Dr. Hackney cited several studies including a recent (presumably unpublished) study he participated in which showed no statistically significant decrease in lung function in asthmatic volunteers at ozone concentrations near 0.20 ppm and stated at several points that there is no definitive evidence to suggest ozone effects at levels below 0.25 ppm.

Dr. Phyllis Mullenix presented testimony at the Minnesota hearings and provided comment on testimony taken at the November 18, 1981 public hearing in Portland.

In written testimony presented at the Minnesota hearing, Dr. Mullenix stated that the "agency staff puts an unjustified amount of confidence in evidence suggesting a deleterious effect of ozone at 0.15 ppm". Furthermore, she states that DeLucia and Adams did not report significant changes in pulmonary functions at 0.15 ppm ozone. They did observe significant but transitory reduction in forced expiratory volume at one second in their subjects at 0.30, but not 0.15 ppm ozone for one hour. These observations are in agreement with several other studies.

Dr. Mullenix made reference to the study by Linn and coworkers (1980) who experimented with ozone effects in exercising asthmatic and normal subjects during two hour exposures to polluted ambient air containing ozone from 0.12 to 0.32 ppm. The study reported small significant losses in expiratory performance and total lung capacity in both normal and asthmatic subjects with no significant difference in response between these two

classes. The changes in lung function were described by the authors as "...quite small; they were often no larger than the changes in pre-exposed measurements between study days and could be considered close to or within the "noise level" of repeated measurements in an individual subject over a short time."

Addressing the issue of long-term health effects such as cancer, Dr. Millenix noted that while a latency period for development limits findings in epidemiological studies, acute studies to date does not indicate any cytogenetic effect in either humans or animals exposed to 0.4 ppm ozone for four hours.

Finally, on the subject of an adequate margin of safety, she notes that while the air quality standard averaging time is one hour, most studies demonstrating a health effect utilized two to four hours exposure time. Furthermore, the frequency of occurrence of the standard (once a year on a statistical average) constitute an addition of margin of safety, especially since the effects of ozone are temporary and reversible within a matter of minutes.

In discussing the results of the Linn and coworkers study (1978), Dr. Mullenix noted that a correlation was established between symptoms and measured changes in pulmonary function in more sensitive subjects than the DeLucia and Adams study but using ozone concentrations of double or more used by DeLucia and Adams. Further, she noted, that in the DeLucia and Adams study, symptoms and pulmonary changes were uncoupled. In previous written testimony, Dr. Mullenix criticized the DeLucia and Adams study from the standpoint of failing to insure unbiased reporting of symptoms by use of a systematic and standardized method of questioning the subjects.

In a letter addressed to the Hearings Officer for the Department of Environmental Quality, Dr. Mullinex offers comments on some testimony received at the November 18, 1981 public hearing on ozone held in Portland. The first set of comments concern testimony presented by Don Clark. Dr. Mullinex, in response to a comment that ozone causes cancer, states that in one unreplicated study in 1970 (Werthamer, et al.), examination of mice exposed to unusually high ozone levels (4.5 ppm) for months indicated the occurrence of cellular alterations. However, other studies (Gouch et al., 1976, and McKenzie et al., 1977) showed no such effects in either animals or humans at levels closer to normal ambient levels and an epidemiological study by Buell et al., (1967) failed to associate lung cancer and ozone. Relative to a comment by Mr. Clark that ozone causes emphysema, Dr. Mullenix cites several studies that show no appreciable change in pulmonary function below 0.25 ppm (twice Department standard) and two studies (Cohen et al., 1972 and Linn et al., 1976) which showed no difference in pulmonary function, symptoms of chronic lung disease or occurrence of chronic obstruction or pulmonary diseases in humans living in high or low oxidant areas.

Dr. Charles Shade, in his testimony, referenced two studies showing health effects of ozone at low levels. Dr. Mullenix notes that, in the Zaganski

study, the occurrence of cough, one of the effects noted, was not consistent in the various sensitive populations studied and eye irritation (another effect in the study) is not associated with ozone (Stephens et al., 1961 and Huess and Glesson, 1968) but may have occurred as a result of a co-existing pollutant.

The study by Detels and Colleagues (1979) which reported decreased lung function of persons in high pollution areas as compared to persons of low pollution areas, doesn't mention what the levels are or even which pollutants were present in either area. Furthermore, this study offers no substantial evidence that relaxation of the ozone standard from 0.08 to 0.12 ppm will create any significant adverse effect on public health.

AA1638 (1)
Spencer L. Erickson:a
229-6458
December 11, 1981

Department Comments On Testimony Received At The Public
Hearings On November 18 and 23, 1981 Concerning The
Proposed Change In The State Ozone Standard

Primary arguments against the proposed rule revision dealt with either demonstrated health effects at levels near or below the proposed standard or potential long-term effects of ozone exposure. Principle documents cited included the DeLucia and Adams study (1977) and the EPA Summary Statement On The Health Effects Of Photochemical Oxidants. It should be noted that the DeLucia and Adams study was a principle study relied upon by the EPA Health Effects Committee. Concerning the DeLucia and Adams study, Dr. Phyllis Mullenix, a noted researcher from Harvard Medical School, testified that no reported changes in pulmonary functions were noted at 0.15 ppm ozone and Dr. Jack Hackney, another noted researcher, indicated that the reported symptoms at 0.15 ppm were not scientifically supportable and may have been artifacts of the experimental protocol. Furthermore, since the DeLucia and Adams study used subjects "of normal health", questions regarding the effects on sensitive populations have been raised. Dr. Hackney testified that several studies have been conducted to answer this question and they have failed to find a "sensitive population". Similar testimony was presented by Dr. Mullenix.

Epidemiologic studies such as Cohen, et. al., 1972 and Linn, et. al., 1976 have been conducted on large populations in both high and low oxidant areas and have failed to show differences in pulmonary function, chronic lung disease or pulmonary diseases and other studies (both laboratory and epidemiological) have failed to associate lung cancer and ozone at reasonable concentrations (one report did show cellular alterations on mice exposed for several months to 4.5 ppm ozone).

Both Drs. Mullenix and Hackney stated in their testimony that there is no supportable data indicating health effects below 0.25 ppm and most of these studies used exposure times greater than the one hour proposed standard averaging time. Additionally, the proposed standard would allow an average of only one day per year with ozone in excess of 0.12 ppm for one hour as contrasted to many of the studies which used repeated exposure of subjects.

It should be noted with respect to several testifiers that the Department's judgement in setting of a primary standard is influenced by economic considerations only to the extent that it realizes an economic hardship may occur if the standard is more stringent than required.

AA1654 (1) (a)

*Environmental Quality Commission*

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MEMORANDUM

To: Environmental Quality Commission

From: Hearings Officer

Subject: Hearing Report on the State Ozone Ambient Air Quality Standard and the Oregon State Implementation Plan.

SUMMARY OF PROCEDURE

Commencing at 10:00 a.m. on Thursday, August 21, 1980, a public informational hearing was held in Room 511, 522 Southwest Fifth Avenue, Portland, Oregon regarding the state ozone ambient air quality standard and the Oregon State Implementation Plan. A second hearing was held in Medford, Oregon on August 22, 1980 in the Medford City Hall, City Council Chambers. The oral and written testimony received at these hearings is summarized below.

Persons Presenting Oral and Written Testimony

Storrs Waterman	Portland Chamber of Commerce
Candice Hatch	Seton, Johnson & Odell, Inc.
James E. Walther	Crown Zellerbach Corp.
Cynthia J. Kurtz	City of Portland
Thomas C. Donaca	Associated Oregon Industries
John A. Charles	Oregon Environmental Council
Carol Edwards	Port of Portland
Vera A. Morrell	Rogue Valley League of Women Voters
Lynn Newbry	Medford Corp.
Stuart Foster	Greater Medford Chamber of Commerce
Peter Sage	-

Persons Presenting Oral Testimony

Llewellyn Matthews	Northwest Pulp and Paper Association
Hayes H. Rossman	Medford Planning Commission
John L. Smith	Southern Oregon Timber Industries Association

Contains
Recycled
Materials

Persons Presenting Written Testimony

D. J. Fogelquist	Western Oil & Gas Association
Jan D. Sokol	Oregon Student Public Interest Research Group (OSPIRG)
Albert G. Lucas	General Motors Corp.
Giles Larrabee	-
Jeffrey C. Muffat	3M Corp.
Anonymous	(Portland) Growth Management Project Steering Committee
Genevieve Sage	Oregon Lung Assn., Southern Region
Janet Calvert	League of Women Voters of Oregon
Lou Hannum	Jackson County City/County Air Quality Liaison Committee
Patricia P. Kuhn	-
Donald R. Arkell	LRAPA
David Lawrence, M.D.	Multnomah County

SUMMARY OF TESTIMONY

Carol Edwards presented testimony for Ken Johnsen of the Port of Portland opposing inclusion of the current .08 ppm state ozone standard in the Oregon State Implementation Plan, as well as the schedule and plans for attaining this standard. The Port feels this matter should be controlled and enforced by the state and not by the Environmental Protection Agency. Since the Environmental Protection Agency has stated they will not provide funds for preparing or implementing plans to meet a more stringent state standard, there appears to be no benefit to the state for including it in the SIP. Also, because of the difficulty in reducing emissions to meet even the .12 ppm standard, the Port feels it is not appropriate to adopt a more stringent standard.

Cynthia J. Kurtz of the City of Portland presented testimony recommending adoption of .12 ppm as the state ozone standard, and including this standard, along with the controls necessary to meet it in 1987, in the Oregon State Implementation Plan. She finds no justification at this time for believing that .12 ppm is not adequate to protect the public health. She said the current two-tiered approach of attaining the .12 ppm standard by 1987 and attaining the .08 ppm standard by 1992 is unfair and confusing to both industry and the public; it will cause industry to stall and delay in applying pollution control equipment. She said the two-tiered approach also makes it difficult to make good decisions regarding industrial growth in the nonattainment area.

Storrs Waterman of the Portland Chamber of Commerce recommended revising the state ozone standard from .08 ppm to .12 ppm. He feels that .12 ppm is an adequate level to protect the public health and welfare, and until it is demonstrated that a more restrictive level is necessary, the standard should be no less than .12 ppm. He said it is questionable at this time whether separate primary and secondary standards are appropriate. He

questioned the cost-effectiveness of meeting a standard below that necessary to protect the public health. He said the Bio-Mass task force report indicates that retention of the .08 ppm standard will jeopardize the use of existing and future hog fuel boilers, at a time when we need bio-mass as a suitable source of energy. Mr. Waterman feels that if the state retains a standard more stringent than the federal .12 ppm standard it should not be included in the State Implementation Plan, nor should the schedule for adopting plans or the plans to meet the state standard be included in the SIP because of the difficulty of revising the SIP, and the difficulty of achieving a more stringent standard. He also pointed out the difficulty in enforcing a .08 ppm standard in the Portland-Vancouver Interstate Air Quality Maintenance Area while the State of Washington enforces this state standard of .12 ppm.

Candice L. Hatch presented testimony for F. Glen Odell of Seton, Johnson & Odell, Inc.; in support of revising the state ozone standard to .12 ppm. Mr. Odell believes the State of Oregon should rely on the expertise and judgement of the federal government in setting air quality standards. He questioned the practicality of achieving a standard more stringent than .12 ppm because, according to DEQ and Metro staff reports, it is problematical whether the most stringent control measures capable of implementation in the Portland area will achieve the level of emission reduction believed necessary to achieve the .12 ppm standard. His firm is currently publishing the final report of the Portland Growth Management Study for the City of Portland, and he provided information on the cost of growth in the Portland region because it is a nonattainment area for ozone and must provide offsetting emissions for major new or modified sources of volatile organic compounds. The study estimates that Portland area industries will have to spend about \$31,000,000 on emission reductions from existing sources, in addition to providing lowest achievable emission rates on new sources, to support new industrial growth between now and 1987. The study estimates that these costs will prevent the creation of between 500 and 1400 new jobs that would otherwise be developed between now and 1987. Thus, Portland industry faces a very substantial cost to achieve and maintain the .12 ppm ozone standard and will certainly face much greater costs to meet a .08 ppm standard. Therefore, in the absence of clear and incontrovertible evidence that the .12 ppm ozone standard is inadequate to protect health, he believes it is highly inappropriate to maintain or adopt a more stringent state standard.

Dr. James E. Walther of the Crown-Zellerbach Corp. submitted testimony in support of a change in the state ozone standard from .08 ppm to .12 ppm because the basis for the .08 ppm standard has not been substantiated by definitive studies. He said the available health effects data indicates no effects of clinical significance occur below .25 ppm, so a standard of .12 ppm provides more than an adequate margin of safety. He submitted a statement by Dr. Phyllis Mullerix of the Harvard Medical School into the record, which critiques the medical evidence EPA relied upon in setting

the .12 ppm standard. He said there is no evidence that a secondary standard more stringent than a primary standard of .12 ppm is necessary to protect vegetation. He cited examples where natural background levels of ozone approached or exceeded .08 ppm. Therefore he recommends revising the primary and secondary ozone standard to agree with the federal standard, but if a lower standard were selected, such standard should not be in the State Implementation Plan and subject to federal enforcement.

Llewellyn Matthews of the Northwest Pulp and Paper Association agreed with much of the prior testimony and adopted by reference Dr. Walther's testimony regarding the technical basis for the .12 ppm standard. She said NWPPA supports a revision of the state standard to be consistent with the federal standard because there is an inadequate inventory of data to justify a standard different from the federal standard. Also, because the state standard is exceeded for short periods of time on some days and the federal ozone standard was exceeded only once in 1979, she questions whether the planning efforts and stringency of the control strategies which would be required justify attaining an objective for which there is not an adequate basis. Finally, if the EQC decides to retain the more stringent standard, she recommends the standard not be included in the SIP to yield greater control to the state until such time as there is conclusive evidence to support the more stringent standard.

Tom Donaca of Associated Oregon Industries presented testimony recommending adoption of 0.12 ppm as the single enforceable ozone standard for Oregon. He stated that the present federal rule set that level to protect public welfare as well as public health and that since the Environmental Protection Agency was unable to determine the epidemiological and toxicological effects of ozone, the state should support such a level. He pointed out that this standard should be soundly based because there is only an indirect correlation between emission of volatile organic carbon and ozone formation.

Mr. Donaca also stated that the AQMA advisory committees of both Medford and Portland have struggled to devise strategies for attainment of the 0.12 ppm standard and neither have practical solutions for attaining the 0.08 ppm standard. Finally, he said that the emissions from vehicles in the Vancouver area, not under control of the Portland vehicle inspection program, represents of source without a clear method of control.

Written testimony from the (Portland) Growth Management Steering Committee stated that if a 0.12 ppm standard were adopted, a growth cushion could likely be developed while retention of the 0.08 ppm standard may totally remove the possibility of a growth cushion as an option for new growth and severely limit the availability of offsets.

Mr. John Charles of the Oregon Environmental Council pointed out that the United States Congress found the margins of safety supposedly ensured by national standards "seem to have vanished in the face of new data" (H. Rept. No. 94-1175 at 85) and that the "standard of 0.08 ppm for ozone had little or no margin of safety" (H. Rept. No. 94-1175 at 86-88). He also pointed out that the Environmental Protection Agency, in declaring the national ozone standard to 0.12 ppm admitted that a no effects threshold concentration cannot be identified without uncertainty.

Mr. Charles maintained that since the establishment of a standard with an adequate margin of safety is "the purest form of guesswork - it is no better than a shot in the dark," the traditional economic framework of analysis be modified to take the uncertainty into account. He contends that the incremental cost of additional pollution control measures is likely low relative to the possible health costs that would be imposed on the public by adoption of the 0.12 ppm standard.

Mr. Charles concluded that the Oregon Environmental Council is in favor of retaining the current state standard of 0.08 ppm and including this standard in the Oregon State Implementation Plan to reduce administrative cost of enforcement because of the more liberal provisions for citizen enforcement in the federal act.

The Western Oil and Gas Association presented written testimony in support of adopting 0.12 ppm as the state's ozone standard for both primary, health effects, and secondary welfare effects. They point out that the current Environmental Protection Agency standard of 0.12 ppm ozone is currently being legally challenged in the U.S. Court of Appeals for the D.C. Circuit. As part of the testimony, a statement from Dr. Phyllis J. Mullenix of the Harvard Medical School which was presented before the Air Quality Conference in San Francisco, California on January 16, 1979 was presented. Dr. Mullenix states that the Environmental Protection Agency ignored the advice of the Science Advisory Board in proposing the 0.12 ppm standard in that the Science Advisory Board felt that the Environmental Protection Agency attributed too much significance to certain studies that indicated health effects at levels near 0.15 ppm. Further quotes in the paper from the President's Regulatory Analysis Review Group indicate they felt that evidence of health effects below 0.25 ppm is quite sparse, that evidence of health effects at 0.15 ppm is weak and that the ozone-related health effects appear short-term and reversible.

Jan D. Sokol presented testimony for the Oregon Student Public Interest Research Group (OSPIRG) in support of retaining the 0.08 ppm standard and making it part of the Oregon's State Implementation Plan. Mr. Sokol presented a letter dated June 19, 1980 to the Environmental Quality Commission and last year's testimony on the proposed ozone standard. In his letter, Mr. Sokol indicates that while Environmental Protection Agency funding may not be available for preparation or implementation of control strategies for the 0.08 ppm standard, transportation planning funds may be available.

Last year's OSPIRG testimony indicated that there was some question concerning the margin of safety and that the larger margin provided by the 0.08 ppm standard was suggested. He concluded that inadequate evidence had been presented to justify a change in the standard.

Mr. Albert Lucas representing General Motors presented testimony in favor of adopting the 0.12 ppm level as the state standard. Mr. Lucas presented a paper submitted to the Environmental Protection Agency in September, 1978 as a support document. This paper contends that significant concentrations of ozone can be attributed to stratospheric downwash and that remote monitoring by the Environmental Protection Agency has measured up to 0.12 ppm in some cases in the eastern U.S. and General Motors measured concentrations of up to 0.066 ppm ozone (one hour average) at a remote site in South Dakota, virtually all of which is attributable to stratospheric downwash. He also contends that a re-examination of Environmental Protection Agency smog chamber studies indicate an upper limit of 0.042 ppm ozone could be formed by reaction of terpenes from natural sources, especially when mixed with biogenic sources of oxides of nitrogen. Further, he states that the highest emissions of terpenes, (days of highest temperatures) occur at times when the stratospheric contribution is large.

Through a fairly lengthy discourse of control strategy costs versus health benefits, General Motors indicates that the net cost-effectiveness ratio for tightening the standard from 0.10 to 0.08 ppm is \$1900 per person day of discomfort. (defined as ranging from cough or headache to heart and lung disease in the elderly.).

Ms. Genevieve Sage representing the Oregon Lung Association, Southern Region, gave testimony in support of retaining the 0.08 ppm standard because it is adequate to protect public health and is attainable in southern Oregon. She stated that the Oregon Lung Association does not take any position on separate primary and secondary standards or inclusion of the 0.08 ppm standard in Oregon's State Implementation Plan.

Ms. Janet Calvert representing the League of Women Voters of Oregon presented testimony in favor of retaining the 0.08 ppm standard. She stated that should the standard be raised, it should be no higher than 0.10 ppm and that if it is raised to 0.12 ppm, the secondary standard should remain at 0.08 ppm. Ms. Calvert cites the DeLucia and Adams study showing adverse effects on health young people at 0.15 ppm ozone while exercising at 65% maximum oxygen intake level and suggests that susceptible individuals would suffer effects at lower levels. She also quoted the Environmental Protection Agency Risk Assessment panel estimate that an increase in ozone concentration from 0.08 to 0.10 ppm increases the risk of susceptibility to respiratory disease and aggravation of asthma, emphysema and bronchitis by 93%.

A final quote from the National Academy of Sciences released in 1974 stated that the 0.08 ppm ozone standard had little margin of safety.

Mr. Lou Hannum presented testimony representing the views of the Jackson County City/County Air Quality Liaison Committee. Mr. Hannum reported that the Committee is in favor of retaining the 0.08 ppm standard, did not feel that a secondary standard was warranted, and did not take a position on inclusion of the standard into Oregon's State Implementation Plan.

Mr. Donald Arkell of the Lane Regional Air Pollution Authority presented testimony in favor of adopting a state ozone standard of 0.12 ppm and revising the State Implementation Plan accordingly. Mr. Arkell feels that a standard of 0.12 provides a margin of safety and that unless data is available to suggest that public health is adversely affected at concentrations below the 0.12 ppm federal standard, there is no basis for maintaining the current 0.08 ppm standard.

He further stated that a more restrictive welfare standard should be adopted only after full consideration of the benefits versus the costs of reducing hydrocarbon and nitrogen oxide emissions. Furthermore, if a secondary standard is adopted, he felt that it would be appropriate for the state to establish its own priorities to meet the goal and thus it should not be included in the State Implementation Plan.

Finally, he recommended that the alert level in the Emergency Episode Plan be changed from 0.1 to 0.2 ppm to restore consistency with the federal standard.

Dr. David Lawrence of the Multnomah County Department of Human Services recommended retention of the current 0.08 ppm ozone standard because it appears to provide the most definite margin of safety below the lowest adverse ozone health effects reported. He said that the 0.12 ppm standard had little if any margin of safety but that a 0.10 ppm standard should also be considered since it is probably more reflective of the Environmental Protection Agency's interpretations considering health benefits versus economic concerns and some margin of safety is provided.

However, Dr. Lawrence pointed out that the congressional intent of the Clean Air Act was to set fully protective health standards without influence of cost consideration and then provide flexibility into the cost of implementation of the standard.

Finally, he advised that the standard be included into the State Implementation Plan to assure substantive compliance planning effort.

Mr. Giles Larrabee representing himself commented that the Department should recommend a standard and ask for comments. He made no recommendations on the existing 0.08 ppm standard, the proposed standard or inclusion in the State Implementation Plan.

Ms. Patricia Kuhn representing herself presented testimony in favor of retaining the current state ozone standard of 0.08 ppm and that it be included in the State Implementation Plan as a single standard (not primary and secondary). She indicated that several people in southern Oregon including several physicians and they were in favor of retaining the current standard.

Ms. Vera Morrell presented testimony in behalf of the Rogue Valley League of Women Voters in support of a single state standard of 0.08 ppm and inclusion of this standard into the State Implementation Plan. She noted that Federal standards should be viewed as a minimum below which states may not set their standards but that the state has the right to set higher standards. Further, she said that the unique weather and topography in the Rogue Valley warrants the strongest standards possible.

Mr. Lynn Newbry of the Medford Corporation presented testimony in favor of adopting 0.12 ppm as the states primary ozone standard. Mr. Newbry states that no one in Oregon has done sufficient research or has obtained enough data to challenge the validity of the 0.12 ppm federal standard. He states to achieve air quality levels in excess of the 0.12 ppm standard could significantly impact the states economy, and that attempts to bring photochemical oxidants within the 0.12 ppm standard have not been notably successful even with large expenditures of capital and research.

Mr. Stuart Foster presented testimony for the Greater Medford Chamber of Commerce in favor of adopting the federal 0.12 ppm ozone standard as the state's primary standard and sees no need for a secondary standard. He also stated that if the current standard is maintained, it should not be included in Oregon's State Implementation Plan. Mr. Foster indicated that the chamber of commerce commissioned Mr. R.L. Gatenbein, P.E., of Marquiss and Associates to do a study of Clean Air Acts effects in the Medford AQMA. One of Mr. Gatenbein's conclusions was that Oregon did not have sufficient data to justify a standard different than that adopted by the Environmental Protection Agency.

Mr. Foster feels that proponents of a more stringent standard should be required to present clear and convincing scientific evidence showing the federal standard to be insufficient for the protection of public health.

Finally, Mr. Foster remarked that there is a the question of whether local emissions or ozone transport was the cause of ozone standard exceedences in the area.

Mr. Peter Sage representing himself gave testimony in favor of retaining the current state standard. He stated that the way to solve the air quality problem was not to change the standard but to clean the air. Mr. Sage stated that most people in Jackson County are committed to cleaning up the air and that the livability of the Rogue Valley is one of the greatest drawing cards for attracting new clean industry.

Mr. Hayes H. Rossman of the Medford Planning Commission presented testimony favoring retention of the 0.08 ppm ozone standard. Mr. Rossman expressed his concern that since the major source of ozone precursors is the automobile, a change in ozone standard from 0.08 to 0.12 ppm may lead to difficulties in meeting the carbon monoxide standard.

Mr. John L. Smith of the Southern Oregon Timber Industries Association presented testimony in favor of adopting a 0.12 ppm ozone standard, not considering a secondary standard and not including control strategies for a more stringent standard, if retained, in the Oregon State Implementation Plan.

Mr. Smith indicated that he felt the 0.08 ppm standard was far beyond the level needed to protect public health and welfare and quoted a Harvard university study which said a level of 0.25 ppm was adequate to protect public health with a danger level occurring at 0.32 ppm. Also, he said that he understood the federal standard was scheduled for review in 1982 and indications are that consideration will be given to revising it upward.

Mr. Smith said he could see no justification for a separate secondary standard at this time but that should a higher primary standard be adopted such as 0.25 ppm, a lower secondary standard may be considered. He also pointed out that achievement of the 0.08 ppm standard is difficult especially in view of the background levels of 0.05 ppm.

In conclusion, Mr. Smith said that considering the economy both locally and nationally, "it is clear the time for environmental realism has arrived."

Mr. Jerry Muffat of 3M presented testimony in favor of adopting 0.12 ppm as the state's primary and secondary standard and inclusion of only that standard into the State Implementation Plan.

Mr. Muffat cited statements from the recent U.S. Supreme Court case involving the benzene standard which said standards cannot be invoked without convincing evidence showing that a "significant risk" is being eliminated. He concludes that since there is not adequate scientific justification to demonstrate such risk at the 0.08 ppm level and that since there is no findings of respiratory ailments having been caused by exposure to 0.12 ppm levels, the state should adopt the federal level.

3M recommends that Oregon begin detailed studies on the welfare effects in the state with an accompanying cost/benefit analysis. Until the results of those studies are available, they believe that the 0.12 ppm level is adequately protective for a secondary standard.

Finally, Mr. Muffat recommends that no ozone standard other than the federal standard of 0.12 ppm be included in the Oregon State Implementation Plan because: 1) any decision to go beyond the federal standard is not

Environmental Quality Commission

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a concern of the federal government, 2) flexibility to change the standard would be maintained, 3) unnecessary federal enforcement would result, 4) federal funds are being provided only for achievement of the federal standard and 5) a different state and federal standard would lead to unnecessary complications with neighboring states (i.e. the Portland-Vancouver AQMA).

AQ449

Department Comments on Testimony Received
at Informational Hearings on August 21 and 22
Concerning the Proposed Change in the State Ozone Standard
and its Inclusion in the State Implementation Plan

Included in arguments against changing the state standard from 0.08 to 0.12 ppm were several statements that the higher level provided either an inadequate or no margin of safety to the protection of public health. The principal study relied upon in these testimonies was the study of De Lucia and Adams in which approximately half of the subjects tested showed an impairment of performance when subjected to 0.12 ppm levels of ozone. Dr. DeLucia's report was one of many reviewed by the Environmental Protection Agency's Scientific Advisory Board before the 0.12 ppm federal standard was set. Other reports, notably those of Dr. Phyllis Mullenix, examined by the board indicated that standards even above the adopted 0.12 ppm level were adequate to protect public health. It is clear from a review of the studies that no compelling evidence of human health effects at levels below 0.12 ppm were presented to the Environmental Protection Agency.

It was noted by several testifiers that in order to adopt the lower level, clear evidence must be presented that showed the higher level is inadequate to protect public health and Mr. Muffat of 3M went further in citing a statement made by the U.S. Supreme Court stating that without convincing evidence that a significant risk is being eliminated, standards cannot be evoked. It is the Department's view that in light of studies showing no human health effects below 0.12 ppm ozone or higher, clear evidence in support of the 0.08 ppm standards was not presented. The President's Regulatory Analysis Review Group indicated that evidence of health effects below 0.25 ppm is sparse and those showing effects below 0.15 ppm are weak.

The question of how much of a safety margin is adequate was raised by several people including Mr. John Charles of the Oregon Environmental Council who cited a House Report stating that the 0.08 ppm standard had little or no margin of safety and that the Environmental Protection Agency admitted that a no effects threshold concentration for ozone cannot be identified with certainty.

In consideration of this statement, the setting of a standard with a proven margin of safety would seem to rely on the best available evidence of effects levels, which the Environmental Protection Agency took to be somewhere above the 0.12 ppm standard, in agreement with the Mullenix and Harvard reports. In this respect the Department agrees with testimony of Mr. Odell's and others that the state with its limited expertise should rely on the judgement of the Environmental Protection Agency in adopting a primary ozone standard of 0.12 ppm.



Environmental Quality Commission

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MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. E , October 20, 1981, EQC Meeting

Request for Hearing Authorization to Amend the State Ozone Ambient Air Quality Standard (OAR-340-31-030) As a Revision to the State Implementation Plan

Background and Problem Statement

On February 8, 1979 the Environmental Protection Agency adopted a new ambient air quality standard for ozone. EPA set the new standard level based on extensive review of older health and welfare studies and on evaluation of studies completed since the original standard was adopted in 1970. The new standard was set at 0.12 ppm, 50% higher than the old standard. It is based on ozone rather than total photochemical oxidant.

After reviewing the EPA promulgation, the Department requested EQC authorization to conduct public hearings to consider the adoption of the new Federal standard by the state. Testimony was also solicited concerning the appropriateness of adopting a secondary (welfare) standard at a level different from the primary standard. The Department felt that the responsibility for setting primary standards should rest with the federal agency, in as much as the resources of the state agency were inadequate to properly interpret health studies of this type. Other options for oxidant standards were proposed for consideration along with the request for hearings authorization. Hearings were authorized by the Commission, and were held in Medford on May 3, 1979, and in Portland on May 7, 1979.

The testimony received at the public hearings was evenly distributed between those in favor of the proposed standard and those desiring to retain the present standard.

On June 8, 1979 the Commission heard testimony from several individuals opposed to the change in the state standard and voted to retain the 0.08 ppm standard. The EQC adopted a schedule to develop a plan by January 1985

to meet the state standard and to attain it by December 1992. The Department was also directed to submit to EPA current plans developed to meet the Federal .12 standard.

On November 20, 1979 the Department received a letter from Mr. Jan Sokol, representing the Oregon Student Public Interest Research Group (OSPIRG), indicating that his and OSPIRG's opinion was that the Commission had directed the Department to include both the standard and a time table for attainment in the State Implementation Plan. The Department responded that it disagreed with that opinion but planned to bring the matter to the attention of the Commission to assure that there was no misrepresentation of its intent.

On June 20, 1980 the Department asked the Commission for clarification on the point of inclusion of the 0.08 ppm standard in the SIP. Upon receiving testimony from two parties, Mr. Jan Sokol in favor of and Mr. Tom Donaca, Associated Oregon Industries (AOI), opposed to, the Commission authorized the Department to hold public hearings to determine if 1) the state standard should be changed and 2) the standard should be submitted as a SIP.

On August 21 and 22, 1980 public hearings were held in Portland and Medford. The hearing notices are included as Attachment 1. Again, little new testimony was received and roughly half the testimony was in favor of adopting 0.12 ppm as the state standard. A summary of testimony (Attachment 2) and Department comments (Attachment 3) are included.

The Department intended to bring the results of the public hearings before the Commission at its October, 1980 meeting when it learned of a lawsuit that had been filed against EPA by the National Resource Defense Council (NRDC). Several points were presented in the case which were thought to have some bearing on the final Commission's decision, namely:

- 1) A change in ozone calibration methods incorporated in 1979 by EPA yields data that may be 15-25% lower than that collected using the previous calibration method.
- 2) Health effect studies used the old calibration method so, relative to the new method, the ozone levels reported for threshold health effects are actually 15-25% lower.
- 3) EPA did not consider these changes when setting the new (0.12 ppm) standard and thus in effect adopted a .14 to .15 ppm standard.

The Department was led to understand that a decision in the case being heard by the Washington, D.C. Circuit Court would be reached in a few months, and elected to delay final recommendation to the Commission until after a final decision had been rendered. The EQC was apprised of this position at a breakfast meeting. After almost a year's wait, a decision in the case still has not been reached. This delay is considered highly

unusual. EPA speculation is that if for some reason the court did rule in favor of the plaintiff, they would not direct a change in the standard but direct EPA to review the standard taking into account the new calibration procedure. Final outcome would thus be another year or more away considering the process, EPA must follow. This process also may or may not result in a change to the .12 standard.

In the recently adopted state new source review rules and SIP's, growth margins are proposed for ozone strategies based on the Federal standard of 0.12 ppm. Since the current state standard of 0.08 ppm may require use of some or all of this growth margin to attain standards, some local governments and industrial representatives have urged final resolution of the state standard so that the uncertainty of how much future control may be needed is clarified.

Authority to Act and Statement of Need

The Authority to Act and Statement of Need are included with this report as Attachment 4.

Alternatives and Evaluations

Three primary alternatives exist for the consideration of the Commission. They are as follows:

- 1) Continue to wait for the Federal court case decision.
- 2) Retain the current state standard of 0.08 ppm, measured as ozone.
- 3) Conduct a hearing to consider adoption of a new state primary and secondary standard of 0.12 ppm, measured as ozone.

The consequences of adopting the above alternatives are as follows:

- 1) Even if the court acts shortly on the pending case, final resolution of the Federal standard may be a year or more away. The EQC would always have the option to revise the state standard if EPA changes this standard in the future.
- 2) Retention of the current 0.08 ppm state ozone standard would require ultimate changes in the control strategies and growth margins. These changes will limit growth and increase strategy costs. Also EPA has indicated that it would not supply funds for transportation control plans to attain standards below the Federal standard so additional control costs will rest entirely within the state. No compelling evidence exists which justifies such a standard to protect health and welfare.
- 3) Adoption of 0.12 ppm as the state's new ozone standard would allow final resolution of the growth margin and future control requirement issues. Furthermore, adoption of the 0.12 ppm level

as the state standard would provide uniformity with the national standard. It would be necessary to change the alert level for ozone episodes to 0.20 ppm since the current alert level (0.1 ppm) is lower than the proposed standard.

Discussion

The Department has concluded that it is not sufficiently staffed with the necessary expertise to evaluate the health effect studies for the purpose of establishing a primary (health) standard and it should rely on the judgment of the EPA. Furthermore, the Department feels that, given the technical guidance at the disposal of the EPA, separate state standards should only be considered if clear and convincing evidence supports it. While some evidence exists suggesting health effects below the Federal standard, there is opposing evidence that indicates no health effects occur below values twice the federal standard. In the Department's limited review, there appears to be no conclusive evidence indicating the federal standard is not sufficiently protective of human health.

Considering the NRDC vs EPA suit, a ruling in favor of NRDC would probably result in a new evaluation of the health effects studies and possibly still no change in the standard. Should a change occur, the state's ozone standard could at that time be altered to again coincide with the federal standard.

Summation

- 1) EPA has concluded that a standard of 0.12 ppm as ozone is adequate for protection of public health and welfare. The Department believes that state standards should be consistent with federal standards to the extent practicable.
- 2) No conclusive evidence was presented during the testimony taken at the public informational hearings in support of retention of the 0.08 ppm standard for ozone.
- 3) The suit filed against EPA by the NRDC regarding validity of the standard and failure to consider a calibration change in setting the new standard has not yet been decided. Should a decision be handed down in favor of the NRDC, a reevaluation of the health effects data would probably result with no certainty that the standard would be changed in any event.
- 4) Should the federal standard be changed in the future, the state standard could also be changed at that time.
- 5) Resolution of the state ozone standard needs to be made in order to solidify control strategies and growth margins in the SIP's and give local governments and industry some confidence that control requirements will not be continually changing.

6) The state alert level must also be changed to 0.20 ppm as ozone to coincide with the recommended Federal alert level if the state standard is changed to .12.

Director's Recommendation

Based on the Summation, it is recommended that the Commission authorize a public hearing before a hearings officer to consider adoption of 0.12 ppm ozone, 1 hour average, as the state's ozone standard (Amended OAR 340-31-OAR 340-31-030) and to change the alert level in OAR 340-27-010(2) to .20 ppm as ozone.

It is further recommended that testimony from the informational public hearings in August 1980 be included and only new testimony be received at the formal public hearing.



William H. Young

- Attachments
1. Public Hearing Notices
 2. Summary of Testimony
 3. Department Comments
 4. Statement of Need
 5. Proposed Rule
 6. Proposed Public Hearing Notice

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229-6458
September 4, 1981



Environmental Quality Commission

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522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Amendment No. 1 to Agenda Item No. E, October 20, 1981,
EQC Meeting

Request for Hearing Authorization to Amend the State Ozone
Ambient Air Quality Standard (OAR 340-31-030) as a Revision
to the State Implementation Plan

PURPOSE OF AMENDMENT

After completion of the staff report, the Department learned that the District of Columbia Court of Appeals has ruled in favor of the Environmental Protection Agency in the NRDC vs. EPA lawsuit involving the ozone standard. Attorneys revising the September 3, 1981 decision noted two key items: 1) a stated reluctance of the court to "second guess" the Administrator in all but clear cases of "arbitrary and capricious" decisions; and 2) implicit support of the use of risk assessment in determining rational standards in the absence of clear evidence on the presence of threshold effects. The court went on to conclude that the Administrator has jurisdiction in defining a reasonable ambient air standard and in the absence of evidence the decision was irrational, it would not overrule.

Addressing the issue of the margin of safety, the court rejected arguments by NRDC that EPA acted irrationally in acknowledging the calibration error as an added factor in setting the margin of safety while at the same time reducing the margin from a proposed 0.05 to 0.03 parts per million. Further the court stated "Where the Administrator bases his conclusion as to an adequate margin of safety on a reasoned analysis and evidence of risk, the court will not reverse."

EVALUATION AND ALTERNATIVES

This new information effectively eliminates the first alternative in the staff report of waiting until the court suit is settled, and reinforces the proposed action of making the State standard consistent with the Federal standard.

STATEMENT OF NEED FOR RULEMAKING

Pursuant to ORS 183.335(2), this statement provides information on the intended action to amend a rule.

Legal Authority

The legal authority for adoption of these rule changes lies in ORS 468.020, Rules and Standards; and 468.295, Air Purity Standards, Air Quality Standards. The present ambient air standard for ozone is in OAR 340-31-030. The present Emergency Episode Criteria for photochemical oxidants is in OAR 340-27-010.

Need for the Rule

Since adoption of the current state ozone standard of 0.08 ppm, the U. S. Environmental Protection Agency has adopted a less stringent ozone standard of 0.12 ppm. The state needs to reevaluate its standard in light of the federal standard to assure uniformity of standards and allow final resolution of the growth margin and future control requirement issues.

Principle Documents Relied Upon

The following documents have been considered in this proposed rule adoption:

1. Federal Register Vol. 44, No. 28, February 8, 1979, "National Primary and Secondary Ambient Air Standards" Chapter 1, Subchapter C, Part 50 and Part 51, "Revisions to Implementation Procedures Related to Photochemical Oxidants."
2. "Revision of the National Ambient Air Quality Standard for Photochemical Oxidants" January 6, 1978, Staff Summary Paper, External Review Draft, Strategies and Air Standards Division, Office of Air Quality Planning and Standards Division, U. S. Environmental Protection Agency, Research Triangle Park, North Carolina.
3. "A Method for Assessing the Health Risks Associated with Alternative Air Quality Standards for Photochemical Oxidants," External Review Draft, loc. cit.
4. "Alternate Forms of the Ambient Air Quality Standard for Photochemical Oxidants," U. S. Environmental Protection Agency Staff Paper, January 1978, (Preliminary draft).
5. "Summary Statement from the EPA Advisory Panel on Health Effects of Photochemical Oxidants," prepared for U. S. EPA by the Institute of Environmental Studies at the University of North Carolina at Chapel Hill; January 1978.

6. "Air Quality Criteria for Photochemical Oxidant and Oxidant Precursors" Vols. I & II, Preliminary Drafts, U. S. Environmental Protection Agency, Office of Research and Development, Washington, DC, September 1977.
7. "Preamble and Proposed Revision to the National Ambient Air Quality Standard for Ozone;" U. S. Environmental Protection Agency; June 1978.
8. "Ozone and Other Photochemical Oxidants;" Committee on Medical and Biological Effects of Environmental Pollutants; Division of Medical Sciences, Assembly of Life Sciences, National Research Council; National Academy of Sciences; Washington, DC, 1977.
9. Public Hearings Testimony from the Hearings to Consider Changes in the Ambient Air Standard for Photochemical Oxidant, Medford, Oregon, May 3, 1979, and Portland, Oregon, May 7, 1979. Includes all testimony received by the Department as of May 25, 1979.

Fiscal Impact Statement

Adoption of 0.12 ppm as the state ozone standard will have a cost savings to industry and other agencies because of a lesser level of control required. The amount of savings is not calculable at this time because actual control strategies have not been developed for a standard lower than 0.12 ppm.

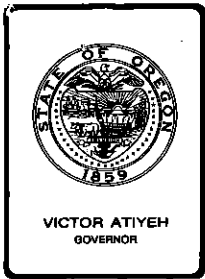
AH45

[Photochemical-Oxidant] Ozone

340-31-030 Concentrations of ozone at a primary air mass station, as measured by a method approved by and on file with the Department of Environmental Quality, or by an equivalent method, shall not exceed [~~160~~] 235 micrograms per cubic meter (~~[0-00]~~ 0.12 ppm), maximum 1-hour average. This standard is attained when the expected number of days per calendar year with maximum hourly concentrations greater than [~~160~~] 235 micrograms per cubic meter is equal to or less than one as determined by Appendix H, CFR 40, Part 50.9 (page 8220) Federal Register 44 No. 28, February 8, 1979.

Stat. Auth.: ORS Ch. 468

Hist.: DEQ 37, f. 2-15-72, ef. 3-1-72; DEQ 15-1979, f. & ef. 6-22-79; DEQ 7-1980, f. & ef. 3-5-80.



Environmental Quality Commission

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MEMORANDUM

TO: Environmental Quality Commission

FROM: Director

SUBJECT: Agenda Item No. L, January 22, 1982, EQC Meeting

Reconsideration of Approval of Lane Regional Air Pollution Authority (LRAPA) to Administer New Source Performance Standards (NSPS) for Kraft Pulp Mills.

Background

At the October 1981 EQC meeting, the Department asked for and obtained EQC approval of Lane Regional Air Pollution Authority's (LRAPA) new source performance standards (NSPS). The Commission directed, pursuant to the Director's recommendation, the Department to submit these rules to EPA and request delegation of authority to LRAPA to implement the NSPS rules in Lane County. (See Agenda Item K, October 9, 1981, EQC Meeting, attached.)

Problem

LRAPA's NSPS included standards for new and modified kraft pulp mills, a source category which was reserved to Oregon State Sanitary Authority/DEQ when the LRAPA program was first approved in 1967 and still is so reserved, because of the complexity and magnitude of the source.

This presents a situation where existing pulp and paper mills in Lane County are under the jurisdiction of DEQ and new kraft pulp mills or major modifications of kraft pulp mills would be under LRAPA jurisdiction, LRAPA rule 37-020(11).

State statutes provide that the EQC can delegate air quality responsibilities, other than field burning and forest land burning, to regional authorities provided it is determined they have the staff and resources to conduct a program equivalent to the State program.

Don Arkell, LRAPA Director, presently has a staff vacancy which he plans to fill with the best engineering talent he can find. He would then like to prove, over time, that LRAPA can adequately handle the Weyerhaeuser pulp and paper mill.

Discussion

If and when the Department determines that LRAPA can conduct an adequate program, the EQC can and should transfer the Weyerhaeuser pulp mill to LRAPA jurisdiction. The Department could still help them with technical assistance if needed.



Contains
Recycled
Materials

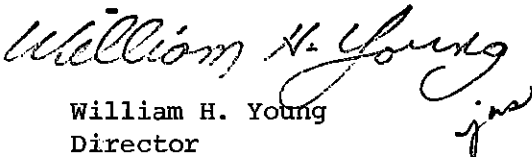
In the meantime, Arkell agreed that the Department should ask the EQC to amend its October action and not authorize LRAPA to implement its NSPS rules applicable to kraft pulp mills at this time.

Summation

1. The Department prematurely asked the EQC to approve LRAPA's implementation of its rule 37-020(11), regulating new and modified kraft pulp mills.
2. LRAPA has intentions of developing capability to conduct a program for pulp and paper mills in Lane County equivalent to the State program. When such capability is developed, LRAPA may then petition to have full jurisdiction of air pollution matters at pulp and paper mills in Lane County.

Director's Recommendation

Based on the above Summation, the Director recommends the Commission amend its action of October 9, 1981, to withdraw delegation for administering the new source performance standards for kraft pulp mills to LRAPA.


William H. Young
Director

Attachment:

Agenda Item K, October 9, 1981, EQC Meeting

JFKowalczyk: ahe
(503) 229-6459
December 23, 1981

Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission
From: Director
Subject: Agenda Item No. K, October 9, 1981, EQC Meeting

Approval of New and Amended Lane Regional Air Pollution Authority (LRAPA) Rules for Permit Fees, for Hazardous Air Contaminants and New Source Performance Standards, and Submittal of New and Amended LRAPA Rules to EPA as a Revision of the Oregon State Clean Air Act Implementation Plan

Background

ORS 468.535(2) requires that regional authorities must submit rules related to air quality standards to the Environmental Quality Commission for approval. After approval, the Department forwards them as a State Implementation Plan revision to the Environmental Protection Agency.

At their June 9, 1981, meeting, LRAPA adopted the following rules:

1. Section 11-015 Definitions, amended
2. Title 22: Permits, fees amended
3. Section 32-800 Air Conveying Systems, new rule
4. Title 35: Emission Standards for Hazardous Air Contaminants, new rule
5. Title 37: Standards of Performance for New Stationary Sources, new rule

The LRAPA Board adopted additional definitions in rule section 11-015 to support the new rules.

Permit fees in Title 22 were raised to equal DEQ permit fees which took effect on July 1, 1981.

Section 32-800, Air Contaminant Systems, requires dry conveying systems with emissions of 3 tons/year or more to reduce emissions to less than 1 ton/year by January 1, 1984.

Title 35: Emission standards for Hazardous Air Contaminants is a rule exactly like the Department's OAR 340-25-450 to -480. LRAPA adopted this rule and requested delegation of authority. Since it includes control of asbestos fibers during demolition, jurisdiction by LRAPA's staff is appropriate. Other portions of the rule dealing with beryllium and mercury are for future, potential situations.

Title 37: Standards of Performance for New Stationary Sources is a rule exactly like OAR 340-25-535, but six of the least encountered new sources of OAR 340-25-535 were not included. LRAPA adopted 14 standards of this rule, gave a negative declaration for the other six, and requested delegation of authority.

Evaluation

Delegation to administer Hazardous Air Contaminant rules and the Standards of Performance for New Stationary Sources to LRAPA for Lane County will prevent dual review of these sources by both LRAPA and the DEQ staff, and should improve administration of these rules since the field staff with sole responsibility will be the closest to the sources.

The Air Conveying Systems rule offers emission reductions of about 150 tons/year which will help to bring the Eugene-Springfield AQMA into attainment with particulate standards.

LRAPA requested that these rule changes, upon approval by the Commission, be submitted to EPA as a SIP revision. Public hearings were held before the LRAPA Board of Directors prior to adoption of the rules. Adequate public notice for SIP revisions was given prior to the hearings. The Air Quality staff has verified that these rules are as stringent or more stringent than the Department's rules.

Summation

1. The Lane Regional Air Pollution Authority has modified some, and adopted other new rules, all of which are at least as stringent as Department rules:

Section 11-015 Definitions

Title 22: Permits

Sections 32-800: Air Conveying Systems

Title 35: Emission Standards for Hazardous Air Contaminants

Title 37: Standards of Performance for New-Stationary Sources

2. LRAPA requests the Commission to approve these rules, transmit these rules to EPA as an amendment to the Oregon State Implementation Plan and seek EPA's delegation for administering Title 35 and Title 37 in Lane County.

October 9, 1981

Page 3

3. Public hearings were held before the LRAPA Board of Directors prior to adoption of the rules. Adequate public notice for SIP revisions was given prior to the hearings.

Director's Recommendation

Based on the above Summation, the Director recommends the Commission approve the above listed LRAPA rules, direct the Department to formally submit the rules to EPA as SIP revisions, and request EPA to delegate authority for administering the Hazardous Air Contaminant rules and Standards of Performance for New Stationary Sources for sources identified in Title 35 and 37 to LRAPA.

Bill

William H. Young

Attachment: New and Modified LRAPA Rules

J.F. Kowalczyk:inb

(503) 229-6278

August 6, 1981

AI1239

LANE REGIONAL AIR POLLUTION AUTHORITY
1244 Walnut Street
Eugene, Oregon 97403

TITLE 37

STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Section 37-005 Applicability

This rule shall be applicable to stationary sources identified in Rule 37-020 for which construction or modification has been commenced after the effective dates of these rules.

Section 37-010 General Provisions

Title 40, CFR, Part 60, Subpart A, as promulgated prior to October 8, 1980, is by this reference adopted and incorporated herein. Subpart A includes paragraphs 60.1 to 60.16 which address, among other things, definitions, performance tests, monitoring requirements, and modification.

Section 37-020 Performance Standards

Title 40, CFR, Parts 60.40 through 60.154, and 60.250 through 60.335, as established as final rules prior to October 8, 1980, is by this reference adopted and incorporated herein. As of October 8, 1980, the Federal Regulations adopted by reference set the following emission standards for the following new stationary source categories (these are summarized here for easy screening, but testing conditions, the actual standards, and other details will be found in the Code of Federal Regulations):

- (1) Standards of Performance for Fossil Fuel-Fired Steam Generators. The pertinent Federal rules are 40 CFR 60.40 to 60.46, also known as Subpart D. The following emission standards, summarizing the Federal standards set forth in Subpart D, apply to each fossil fuel-fired and to each combination wood-residue fossil fuel-fired generating unit of more than 73 megawatts (250 million Btu/hr) heat input.
 - (a) Standards for Particulate Matter. No owner or operator subject to the provision of this rule shall cause to be discharged into the atmosphere from any affected facility any gases which:
 - (A) Contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel or fossil fuel and wood residue.
 - (B) Exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

only to electric arc furnaces and dust-handling equipment, built or modified after October 21, 1974.

- (a) No owner or operator shall cause to be discharged into the atmosphere from an electric arc furnace any gases which:
 - (A) exit from a control device and contain particulate matter in excess of 12 mg/dscm (0.0052 gr/dscf);
 - (B) exit from a control device and exhibit 3.0 percent opacity or greater;
 - (C) exit from a shop and, due solely to operations of any electric arc furnaces, exhibit greater than zero percent shop opacity, except that shop opacity must be only less than 20 percent during charging periods and only less than 40 percent during tapping periods.
- (b) No owner or operator shall cause to be discharged into the atmosphere from dust-handling equipment any gases which exhibit 10 percent opacity or greater.

(11) Standards of Performance for Kraft Pulp Mills. The pertinent Federal rules are 40 CFR 60.280 to 60.285, also known as Subpart BB. The standards for kraft pulp mills' facilities, summarizing the Federal standards set forth in Subpart BB, are applicable only to a recovery furnace, smelt dissolving tank, lime kiln, digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, and condensate stripper system built or modified after September 24, 1976.

- (a) No owner or operator shall cause to be discharged into the atmosphere particulate matter:
 - (A) from any recovery furnace:
 - (i) in excess of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen or
 - (ii) exhibit 35 percent opacity or greater;
 - (B) from any smelt dissolving tank in excess of 0.10 g/Kg black liquor solids, dry weight, (0.20 lb/ton);
 - (C) from any lime kiln:
 - (i) in excess of 0.15 g/dscm (0.067 gr/dscf) corrected to 10 percent oxygen, when gaseous fossil fuel is burned;
 - (ii) in excess of 0.30 g/dscm (0.13 gr/dscf) corrected to 10 percent oxygen, when liquid fossil fuel is burned.

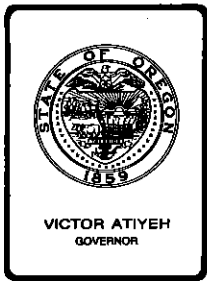
- (b) No owner or operator shall cause to be discharged in the atmosphere Total Reduced Sulfur compounds, (TRS), which are hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide:
- (A) from any digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, or condensate stripper system in excess of 5.0 ppm by volume on a dry basis, corrected to the actual oxygen content of the untreated gas stream.
 - (B) from any straight kraft recovery furnace in excess of 5.0 ppm by volume on a dry basis, corrected to 8 percent oxygen.
 - (C) from any cross recovery furnace in excess of 25 ppm by volume on a dry basis, corrected to 8.0 percent oxygen,
 - (D) from any smelt dissolving tank in excess of 0.0084 g/Kg black liquor solids, dry weight, (0.0168 lb/ton),
 - (E) from any lime kiln in excess of 8.0 ppm by volume on a dry basis, corrected to 10 percent oxygen.

(12) Standards of Performance for Glass Manufacturing Plants. The pertinent Federal rules are 40 CFR 60.290 to 60.296, also known as Subpart CC. The following particulate matter standard, summarizing the Federal standards set forth in Subpart CC, applies to each glass melting furnace which commenced construction or modification after June 16, 1979, at glass manufacturing plants but does not apply to hand glass melting furnaces, furnaces with a design capacity of less than 4,550 kilograms of glass per day, or to all-electric melters. Standard for Particulate Matter:

- (a) No owner or operator of a glass melting furnace subject to this rule shall cause to be discharged into the atmosphere from a glass melting furnace particulate matter exceeding the rates specified in 40 CFR 60.292.

(13) Standards of Performance for Grain Elevators. The pertinent Federal rules are 40 CFR 60.300 to 60.304, also known as Subpart DD. The following emission standards, summarizing the Federal standards set forth in Subpart DD, apply to any grain terminal elevator (over 2.5 million bushel storage capacity) or any grain storage elevator (over 1 million bushel storage capacity) which commenced construction, modification, or reconstruction after August 3, 1978. Standards for Particulate Matter:

- (a) On and after the 60th day of achieving the maximum production rate, but no later than 180 days after initial startup, no owner or operator shall cause to be discharged into the atmosphere any gases or fugitive dusts which exhibit opacity greater than:



Environmental Quality Commission

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522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. M, January 22, 1982, EQC Meeting

Proposed Adoption of a Hazardous Waste Schedule of Civil Penalties, OAR Chapter 340, Division 12

Background

Because of its high potential for human health and environmental damage, hazardous waste requires special management controls. This need has been recognized since 1971 when Oregon first adopted hazardous waste legislation so that today we have a comprehensive hazardous waste management program that controls hazardous waste from the time of generation through transportation, storage, treatment and disposal.

Concurrently, the U.S. Environmental Protection Agency, under Subtitle C of the Resource Conservation and Recovery Act (1976), has developed a national program for the management of hazardous waste. The Act places hazardous waste management in the federal province but includes provisions for the EPA to authorize a state program to operate in lieu of the federal program.

Recognizing Oregon's program, the EPA, on July 16, 1981, granted the Department Phase I Interim Authorization to manage hazardous waste in Oregon. The practical result of this action is that, in most cases, Oregon rules for generators, transporters, storers, treaters and disposers are enforceable with the federal rules being suspended.

However, during the authorization process, certain deficiencies in the state program were identified. Remedial legislation was adopted by the 1981 Legislature (Chapter 680 and 709 - 1981 Laws) and the Department now believes that it has sufficient legislative authority to operate a program fully equivalent to and consistent with the federal program (Final Authorization).

The main rule proposed for adoption at this time, OAR 340-12-068, will remedy the lack of a complete schedule of civil penalties for violations of the hazardous waste program. (Until now, only the unauthorized or

unlicensed disposal of hazardous waste was specifically addressed). We are on a schedule for addressing the other program deficiencies and anticipate bringing further rules before the Commission at a later date.

Public hearings were held during December 1-3 in Medford, Eugene, and Portland. Prior to those hearings, over 1,000 public notices were mailed to hazardous waste generators, management facility operators, the media, interested public, etc., but less than a dozen requests were received for a copy of the proposed rule. Only 9 persons attended the hearings and no comments specific to the rule were offered. Some other comments, primarily indicating confusion between the federal and state hazardous waste programs, are included in the Hearing Officer's Report.

Legal basis for this action may be found in ORS Chapter 459 and Chapter 709 - 1981 Laws.

Alternatives and Evaluation

The alternatives are either to adopt or not adopt the rule. At present, the hazardous waste program is the only major Department program with such a limited schedule of civil penalties. Although it is possible to operate directly under the authorizing statute, ORS 459.995, such a procedure does not serve to reflect program priorities or guide in setting penalty levels for specific violations.

The proposed schedule achieves this end by establishing levels of penalties which penalize most heavily those activities where program violations may lead to the most serious consequences. It is believed to clearly indicate the Department's intent to keep hazardous waste out of the environment.

OAR 340-12-065 is also proposed for modification to maintain the internal consistency of the civil penalty rules. The Public Utility Commissioner regulates transportation under an agreement with the Department and will propose similar penalties under his own rulemaking procedures.

Summation

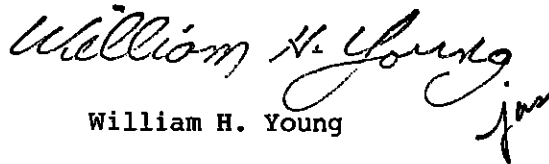
- 1) The Department currently operates a comprehensive hazardous waste management program that controls hazardous waste from the time of generation through transportation, storage, treatment and disposal.
- 2) Although the Department has adequate civil penalty authority, it believes that the statutory language neither reflects program priorities nor guides in setting penalty levels.
- 3) The proposed rule, OAR 340-12-068, is intended to remedy this deficiency by establishing a schedule of civil penalties set at levels commensurate with the consequences of the program violations.

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January 22, 1982
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- 4) OAR 340-12-065 is also proposed for modification to maintain internal consistency of Division 12. Transportation civil penalties will be adopted by the PUC.

Director's Recommendation

Based upon the summation, it is recommended that the Commission adopt the proposed amendments to the civil penalty rules, OAR Chapter 340, Division 12.


William H. Young

- Attachments: I. Statement of Need for Rule
II. Hearing Officer's Report
III. Proposed Revisions to OAR Chapter 340, Division 12

Fred S. Bromfeld:hc
ZHD14
229-6210
December 21, 1981

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

IN THE MATTER OF THE ADOPTION OF)
AMENDMENTS TO CIVIL PENALTY RULES,)
OAR CHAPTER 340, DIVISION 12.) STATEMENT OF NEED FOR RULES.

(1) STATUTORY AUTHORITY:

ORS Chapter 459, and Chapter 709 - 1981 Laws authorizing a civil penalty of up to \$10,000 per day for each day of violation of ORS 459.410 to 459.690, a license condition, or any Commission rule or order pertaining to the generation, treatment, storage or disposal of hazardous wastes.

(2) NEED FOR THE RULES:

The need for the schedule of civil penalties is to reflect program priorities and guide in setting penalty levels for specific violations.

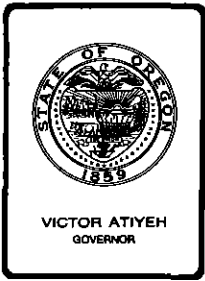
The proposed schedule is intended to achieve this end by establishing levels of penalties which penalize most heavily those activities where program violations may lead to the most serious consequences.

(3) PRINCIPAL DOCUMENTS RELIED UPON:

Existing schedules of civil penalties for other programs (OAR Chapter 340, Division 12) and hazardous waste management rules (OAR Chapter 340, Divisions 62 and 63).

(4) FISCAL IMPACT:

Adoption of these rules will have no fiscal impact on any person operating in compliance with the Department's hazardous waste management program. Persons violating the rules of that program will subject themselves to a civil penalty assessment of up to \$10,000 for each day the violation continues.



Environmental Quality Commission

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522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

ATTACHMENT 2

Agenda Item No. M
1/22/82 EQC Meeting

MEMORANDUM

To: Environmental Quality Commission December 15, 1981

From: Van A. Kollias, Hearing Officer

Subject: Public Hearings on the Proposal to Adopt a Hazardous Waste Schedule of Civil Penalties

Three public hearings were held to receive testimony on the proposed rule regarding the adoption of the hazardous waste management schedule of civil penalties. The hearings and testimony are summarized below. No written testimony was submitted.

Medford Hearing

On December 1, 1981, a public hearing was held at the courthouse in Medford, Oregon. One person attended and testified. Jim Bell of Northwest Printed Circuits felt there is a lack of clarity in the hazardous waste rules for which the schedule was being proposed. As example, he said DEQ and EPA rules were different regarding the length of time a hazardous waste could be stored. He did not want to be penalized for misunderstanding unclear rules. Mr. Bell overall favors our regulations. He believes the proposed penalties schedule is satisfactory as long as enforcement is administered fairly and allows for voluntary compliance.

Eugene Hearing

On December 2, 1981, a public hearing was held at the DEQ office in Eugene, Oregon. James Morris and John Wheeler of Monsanto Company were present and testified.

Mr. Morris said the schedule did not address the difference between a major and minor spill, major and minor contributors, and did not define hazardous waste. He questioned why a schedule was being proposed when many of the hazardous waste regulations were interim. The hearing officer explained that the schedule does not establish the violation but instead sets the amount of penalty should a violation of the hazardous waste rules occur.

John Wheeler said that their main concern was a degree of reasonableness. It is in everybody's interest to protect the environment. He felt as long as there was a degree of reasonableness, he didn't have any objections to the proposed schedule.

Portland Hearing

On December 3, 1981, a public hearing was held at the DEQ office in Portland. No one wished to testify. Six persons were present for information on how the proposed schedule would be administered. Questions were raised on procedures and due process such as: service of the civil penalty notice, prior warning notice and opportunity to correct the violation, right to a hearing, contested case hearing procedures, and right to appeal. The hearings officer reviewed portions of Division 11, Rules of Practice and Procedure - Contested Cases, and Division 12 - Civil Penalties, with the attendees.

Respectfully submitted,

Van A. Kollias

Van A. Kollias
Hearing Officer

VAK:o
GO592 (1)

Solid Waste Management Schedule of Civil Penalties

340-12-065 In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to solid waste management by service of a written notice of assessment of civil penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

- (1) Not less than one hundred dollars (\$100) nor more than five hundred dollars (\$500) for violation of an order of the Commission or Department.
- (2) Not less than fifty dollars (\$50) nor more than five hundred dollars (\$500) for any violation which causes, contributes to, or threatens:
 - (a) A hazard to the public health or safety;
 - (b) Damage to a natural resource, including aesthetic damage and radioactive irradiation;
 - (c) Air contamination;
 - (d) Vector production;
 - [(e) Exposure to any part of an ecosystem to environmentally hazardous wastes, as defined by statute or rule of the Commission;] or
- (e) [(f)] A common law public nuisance.
- (3) Not less than twenty-five dollars (\$25) nor more than three hundred dollars (\$300) for any other violation.

Hazardous Waste Management Schedule of Civil Penalties

340-12-068 In addition to any liability, duty, or other penalty provided by law, the Director may assess a civil penalty for any violation pertaining to hazardous waste management by service of a written Notice of Assessment of Civil Penalty upon the respondent. The amount of such civil penalty shall be determined consistent with the following schedule:

- (1) Not less than two thousand five hundred dollars (\$2,500) nor more than ten thousand dollars (\$10,000) upon any person who:
 - (a) Establishes, constructs or operates a geographical site in which or upon which hazardous wastes are disposed without first obtaining a license from the Commission.
 - (b) Disposes of a hazardous waste at any location other than at a hazardous waste disposal site.
 - (c) Fails to immediately collect, remove or treat a hazardous waste or substance as required by ORS 459.685.

- (2) Not less than one thousand dollars (\$1,000) nor more than ten thousand dollars (\$10,000) upon any person who:
 - (a) Establishes, constructs or operates a geographical site upon which hazardous wastes are stored or treated without first obtaining a license from the Department.
 - (b) Violates a Special Condition or Environmental Monitoring Condition of a hazardous waste management facility license.
 - (c) Dilutes a hazardous waste for the purpose of declassifying it.

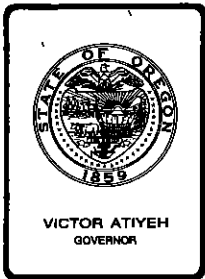
- (d) Ships hazardous waste with a transporter that is not in compliance with OAR Chapter 860, Division 36, or to a hazardous waste management facility that is not in compliance with OAR Chapter 340, Division 63.
 - (e) Ships hazardous waste without a manifest.
 - (f) Ships hazardous waste without containerizing and marking or labeling such waste in compliance with OAR Chapter 340, Division 63.
 - (g) Fails to immediately report to the Oregon Accident Response System (Oregon Emergency Management Division) all accidents or other emergencies which result in the discharge or disposal of hazardous waste.
- (3) Not less than one hundred dollars (\$100) nor more than ten thousand dollars (\$10,000) upon any person who:
- (a) Violates an order of the Commission or Department.
 - (b) Violates any other condition of a license or written authorization or violates any other rule or statute.

Statutory authority: ORS 459.995

NOTE: Underlined _____ material is new.

Bracketed [] material is deleted.

GK177



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item No. N, January 22, 1982, EQC Meeting

Status Report on the Total Suspended Particulate Strategy for the Medford-Ashland AQMA

BACKGROUND

A revised particulate control strategy is needed to meet the federal primary and secondary Total Suspended Particulate (TSP) standards in the Medford-White City area. The state TSP standard is the same as the federal secondary standard. Major particulate sources and potential control measures were reviewed in a report to the Commission at the June 5, 1981 meeting in Medford. Since June 1981, the Air Quality Advisory Committee and the Jackson County Commissioners have completed their recommendations for a particulate control strategy.

EVALUATION

Ambient Air Quality Trends

The Medford-Ashland Air Quality Maintenance Area (AQMA) was designated non-attainment in 1974 because of measured exceedances of the secondary ambient air quality standard for Total Suspended Particulate (TSP). Over the period 1976 to 1979 air quality in the AQMA deteriorated, particularly in the Medford and White City areas. In 1978 the Commission adopted a State Implementation Plan (SIP) designed to improve air quality and meet the secondary standard. Before this plan could be implemented, air quality worsened and on January 10, 1980 the AQMA was designated to be in non-attainment with the primary particulate standard.

The 1978 SIP, which has been partially implemented at this time, has contributed to the air quality improvements recorded during 1980 and 1981. While these improvements appear to be significant, the Medford and White City areas remain in exceedance of the primary standard and are projected to remain in exceedance even with full implementation of the 1978 SIP. It is, therefore, necessary to develop a new SIP containing the additional control measures necessary to improve air quality to meet the primary and the secondary TSP standards.

Source Assessment

A special data base improvement project entitled the Medford Aerosol Characterization Study (MACS) was completed in January 1981. This project was designed to accurately identify the sources contributing to violation of the particulate standard in the Medford and White City areas. Study results indicate that the major sources of TSP are as follows:

<u>Source</u>	<u>Description</u>	<u>Contribution</u>
Vegetative Burning	Primarily residential woodburning, also slash burning, field burning, backyard open burning.	31%
Soil & Road Dust	Primarily paved road dust entrained by traffic, also unpaved road dust and wind blown dust.	30%
Wood Products Industry	Primarily wood-fired boilers, veneer dryers, particle dryers, also air conveying systems.	20%
Other	Motor vehicle exhaust, tire wear, construction, etc.	11%
<u>Unexplained</u>		<u>8%</u>
TOTAL		100%

The MACS results have been used by DEQ, the Jackson County Air Quality Advisory Committee and the Jackson County Commissioners to develop a recommended particulate control strategy.

Proposed Strategy

The Jackson County Commissioners completed their recommendations on the particulate control strategy in November 1981. Their recommended control measures are essentially the same as those recommended in June 1981 by the Jackson County Air Quality Advisory Committee. The major control measures include:

- o Weatherization of homes prior to installing wood stoves.
- o Weatherization of existing homes.
- o Fire wood moisture control program.
- o Temporary curtailment of wood stove use during air pollution episodes.
- o Fugitive emissions control program for industrial and commercial operations.

- o Operation and maintenance program for industrial pollution control equipment.
- o Paving selected unpaved roads and shoulders.

Jackson County recommended a total of 22 control measures. The 22 measures are summarized in Attachment 1. The full set of Jackson County recommendations is included in Attachment 2.

In order to meet the primary particulate standard by 1984, ambient particulate levels must be reduced by 30 micrograms per cubic meter (ug/m^3). The proposed new strategy, combined with continuation of the 1978 strategy, is expected to reduce particulate levels by $32 \text{ ug}/\text{m}^3$. The relative contributions of the control measure categories are:

<u>Category</u>	<u>Projected TSP Reduction</u>
Continuation of 1978 industrial control measures.	12 ug/m^3
New industrial control measures.	2 ug/m^3
New vegetative burning control measures.	16 ug/m^3
<u>New soil and road dust control measures.</u>	<u>2 ug/m^3</u>
TOTAL	32 ug/m^3

Potential Problems

As the Medford Aerosol Characterization Study has indicated, the Medford-White City area exceeds particulate standards predominately because of non-traditional source impacts such as residential woodburning and road dust. Thus, the recommended particulate strategy concentrates on these non-traditional area source categories. Two problem areas complicate the strategies development process. First, the Department and the nation have little experience in the effectiveness of control techniques for non-traditional emission sources. Thus, there is uncertainty in predicting how effective various non-traditional source controls will be. Secondly, the Commission and the Department have very little statutory authority to control residential wood burning emissions. Thus, local ordinances would be required in order to implement the key control measures proposed for the Medford-White City area. The implementing agencies and mechanisms are outlined in Attachment 3.

The uncertainty of control measure effectiveness was considered during the development of the recommended strategy. Energy efficiency and cost effectiveness were major factors considered in selecting control measures. In fact, several of the measures might be justified on an energy or

economic basis alone, even if there were no associated air quality benefits. Both Portland and Eugene have adopted aggressive weatherization programs based on energy benefits. Utility companies have instituted attractive weatherization financing programs based on energy and dollar savings.

Mandatory weatherization, temporary curtailment of woodstoves during pollution episodes, and firewood moisture control programs (possibly restricting cutting schedules) are expected to be controversial. After much detailed and critical review, Jackson County has shown a willingness to tackle the difficult job of adopting ordinances which affect wood heat emissions. The Jackson County Commissioners have directed staff to draft the ordinances necessary to implement their recommended particulate control strategy. Draft county ordinances are expected to be completed in January with public hearings in February 1982.

The City of Medford was well represented on the Air Quality Advisory Committee which outlined the basic recommendations endorsed by the Jackson County Commissioners. Most of the projected air quality improvement would depend on implementation of area source control measures by the City of Medford since the city limits include the area of peak particulate pollution. Implementation of area source control measures within only the City of Medford would result in over 80% of the projected air quality benefit even though the Medford population is only 40% of the AQMA population. Hearings on draft Medford ordinances are expected during February 1982 but have not yet been scheduled.

Substantial industrial, governmental and individual costs are associated with the recommended control strategy. Funding of the control measures may be difficult, especially during the present economic recession. The measures which would impact the Department's budget include additional compliance assurance activities, coordination of the strategy element designed to result in improved operation and maintenance of industrial control equipment and the fugitive emissions control program, public education regarding proper woodstove operation, and development of a woodstove testing methodology and possibly a certification program. Local government budgets may be impacted to an even greater degree.

The recommended control strategy is designed to meet the federal primary particulate standard (75 ug/m^3 annual geometric mean) by 1984. Additional measures will have to be evaluated and implemented in the future in order to meet the federal secondary and state standard (60 ug/m^3). The Department is unable to identify at this time additional control measures, short of sharply curtailed use of woodstoves, which would be adequate to assure meeting the secondary standard in the near future. Offsets would continue to be required, for new or modified industrial sources with significant particulate emissions, in the Medford-White City area.

Woodburning emissions are a nationwide concern. Much research and development is currently underway across the country on methods of reducing these emissions. The Department believes that the long-range solutions to

the air pollution problems from woodheating are the development of cleaner burning woodheating units and increased application of energy conservation and weatherization measures.

Proposed Schedule

The Department had intended to submit the new SIP to the Commission for adoption by July 10, 1981 (18 months following the Medford redesignation as a primary non-attainment area). However, an extended time frame has been necessary to complete local government analysis and ordinance development on area source control measures (primarily weatherization, temporary woodstove curtailment and road dust controls). The Department now anticipates the following SIP adoption schedule:

<u>Action</u>	<u>Date</u>
Local hearings	February 1982
Staff report and draft SIP to EQC.	February 12, 1982
EQC authorization for public hearing.	March 5, 1982
A-95 review.	March 5, 1982
Public notice to Secretary of State.	March 15, 1982
Public hearing.	April 15, 1982
Staff report to EQC.	May 14, 1982
EQC adoption.	June 4, 1982

The above schedule proposes EQC consideration of the Medford SIP for adoption at the June EQC meeting. The Commission may wish to hold the June EQC meeting in Medford.

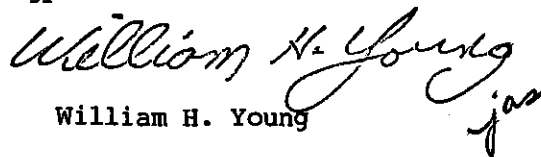
SUMMATION

1. A revised particulate control strategy is needed to meet the primary and secondary standards in the Medford-White City area.
2. The Jackson County Air Quality Advisory Committee and the Jackson County Commissioners have completed their recommendations on the particulate control strategy.
3. Most of the projected improvement in particulate levels is due to proposed control measures affecting residential woodburning.

4. The proposed control strategy appears adequate to meet the primary particulate standard in Medford by 1984, but there is considerable uncertainty in predicting how effective the various non-traditional source controls will be.
5. The proposed control strategy would require both state rules and local ordinances for implementation. Local government has indicated a willingness to pursue local ordinances to control wood heat emissions.
6. Public hearings on local ordinances are expected in February 1982.
7. The Department plans to request the Commission in March to authorize a public hearing on the Medford particulate control strategy.
8. The Commission may wish to hold its June EQC meeting in Medford to consider adoption of the Medford portion of the State Implementation Plan.

DIRECTOR'S RECOMMENDATION

This status report is submitted to the Commission primarily for information purposes. It is recommended that the Commission schedule its June 4, 1982 EQC meeting in Medford to consider adoption of a Total Suspended Particulate standard attainment strategy for that area.


William H. Young

Attachment 1, Recommended Particulate Strategy Summary
Attachment 2, Jackson County Particulate Strategy Recommendations
Attachment 3, Implementing Agencies and Mechanisms

John F. Kowalczyk
229-6459
December 30, 1981
AO605 (o)

Attachment 1

Jackson County Commissioners

RECOMMENDED PARTICULATE STRATEGY - SUMMARY

November 1981

<u>Control Measure</u>	<u>Category*</u>	<u>% of Needed Reduction (18 ug/m³)</u>
1. Trackout Controls	S&RD	0.5
2. Street Sanding/Sweeping	S&RD	2.2
3. Paving Unpaved Roads/Shoulders	S&RD	4.4
4. Fugitive Emissions Control	S&RD/IC	8.7
5. Operation & Maintenance Program	IC	4.9
6. Air Conveying System Mass Emission Limit	IC	**
7. Upgraded Veneer Dryer Controls	IC	1.1
8. DEQ Enforcement	IC	**
9. Firewood Moisture Control	VB	18.0
10. Commercial Firewood Control	VB	4.9
11. Wood Stove Design Standards	VB	**
12. Weatherization (New Wood Stoves)	VB	30.6
13. Weatherization (Existing Homes)	VB	17.5
14. Wood Stove Operation	VB	**
15. Installation Req'ts (Stove Sizing)	VB	**
16. Alternate Heat Source	VB	**
17. Pollution Episode Curtailment	IC/VB	15.8
18. Open Burning Control	VB	0.5
19. Slash Burning Control	VB	**
20. Weatherization Grants (Elderly/Low Income)	VB	**
21. Retrofit Wood Stove Controls	VB	**
22. Solar Access & Orientation	VB	1.4
<hr/> TOTAL		<hr/> 110% (20 ug/m ³)

* Categories: S&RD=Soil & RoadDust; IC=Industrial Controls; and
VB=Vegetative Burning.

** A percentage reduction is not identified for these measures because:

- a. The benefit cannot be precisely quantified;
- b. Most of the benefit will occur after 1984; or
- c. These measures have no direct benefit but are essential to the success of other measures.

*my Young
Deatherbee*



Jackson County Oregon

COUNTY COURTHOUSE / MEDFORD, OREGON 97501

BOARD OF
COUNTY COMMISSIONERS
Commissioners Office 776-7231

November 9, 1981

Mr. Bill Young, Director
Department of Environmental Quality
P. O. Box 1760
Portland OR 97207

Dear Mr. Young:

The purpose of this letter is to forward Jackson County's particulate control strategy recommendations. These recommendations have received the endorsement of the Board of Commissioners, and we request your department's consideration for including them in the State Implementation Plan.

Our staff has been instructed to develop appropriate policies and/or ordinances for implementation of these control measures.

It is our understanding that Mr. Merlyn Hough of your staff will be coordinating efforts for a unified program from all affected cities in our community. Please have Mr. Hough feel free to call Mr. Jim Capp (776-7569) with your agency's questions or concerns.

Sincerely,

Donald J. Schofield
Donald J. Schofield
Chairman

DJS:mkf
Attachments

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 25 1981

AIR QUALITY CONTROL

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
NOV 20 1981

OFFICE OF THE DIRECTOR

JACKSON COUNTY BOARD OF COMMISSIONERS
 FINDINGS & RECOMMENDATIONS
 FOR A PARTICULATE CONTROL STRATEGY
 NOVEMBER 1981

<u>Control Measures</u>	<u>Projected Air Quality Benefit (ug/m³)</u>
	<u>1984</u> <u>1992</u>
1. Trackout Controls	0.1
a. A specific State or County trackout rule should be adopted and enforced to reduce trackout from construction sites, orchards and industrial operations. The rule should specify the responsibility of both the property owner and the vehicle owner or operator to prevent or clean-up trackout.	
b. The City of Medford should increase enforcement of its existing ordinance (Medford Code 5-310) or adopt and enforce a more specific trackout ordinance.	
2. Street Sanding/Sweeping	0.4
a. Airport fog seeding has major impact on the amount of winter sanding required in the Medford-Central Point area. Fog seeding practices (and the resulting sanding) should be evaluated from an air quality perspective by the Airport Commission.	
b) The City of Medford and Jackson County generally limit winter sanding to only the necessary curves, intersections and overpasses. The State also sands some straightaway stretches. The City generally provides quick pickup of sanding material. The County and State generally sweep material off the roadway or allow the material to be dispersed by natural means. AQMA cities, Jackson County and the State should evaluate current street sanding and cleanup practices from an air quality perspective. Improvements should include greater emphasis by County and State on pickup rather than dispersal of road dust.	
c) The City of Medford currently uses both a vacuum sweeper and a brush sweeper to pick up road dust in its routine street sweeping program. A six-month study has just begun in Portland to evaluate the air quality advantages/disadvantages of various types of sweepers. the City of Medford should review the results of this study (when available in late 1981) as input to its long-range sweeping program.	

Control Measures

Projected Air Quality
Benefit (ug/m³)
1984 1992

3. Paving Unpaved Roads

0.8

a. The Medford Area Transportation Study recommends the upgrading of several roadways. If adopted, this would result in the elimination of some unpaved shoulders on portions of Stewart Avenue, McAndrews Road and other streets.

b. The City of Medford should develop an incentive program to pave existing unpaved streets. (A financial incentive program has been used in the past but the program needs to be modified. No funds were budgeted for 1981-82.)

4. Fugitive Emissions Control

1.6

Each industrial site shall develop and implement a plan for minimizing fugitive emissions, including trackout. The plans should be completed by October 1, 1981, and be implemented by April 1, 1982. DEQ should utilize the plan as a basis for compliance action.

5. Operation & Maintenance Program

0.9

Local industries and businesses shall cooperatively develop operation and maintenance (O&M) programs for particulate pollution sources and pollution control devices. Potential components of the programs are:

- a. Personnel training in O&M (similar to cooperative boiler operators training course).
- b. Seminars by manufacturers on design and O&M.
- c. Compilation of preventative maintenance procedures, proper schedules, and maintenance records.
- d. Sharing of common breakdowns, problems, etc.
- e. Cooperative testing of pollution control units.
- f. Compilation of correct operating procedures.
- g. Coordinated approach to spare parts availability.

Control Measures

Projected Air Quality
Benefit (ug/m³)
1984 1992

The business and industrial sectors identified as requiring operation & maintenance programs:

- Wood products industry.
- Aggregate Industry.
- Residual oil burner operators.
- Small wood fired boiler operators.

The O&M coordination groups shall be formed by January 1, 1982. O&M standards shall be developed and implemented by July 1, 1982. A progress report shall be submitted from each group to DEQ by January 1, 1983.

6. Air Conveying System Mass Emissions Limit

DEQ should develop production-based mass emission limits for all air conveying systems as a tool in determining plant site emission limits.

7. Upgraded Veneer Dryer Controls

0.2

0.7

Currently uncontrolled veneer dryers should be required to meet an emission limit of 0.3 lb/1000 ft² (3/8" basis) as an annual average, and 10 percent maximum opacity by January 1, 1984. If the AQMA remains in particulate noncompliance (primary standard), the existing controlled dryers to meet emission limit of 0.3 lb/1000 ft² (3/8" basis) as an annual average, and 10 percent maximum opacity upon replacement of existing control devices, or January 1, 1982, whichever occurs first.

8. DEQ Enforcement

DEQ should maintain adequate staff and resources to monitor and enforce the existing and proposed regulations, in terms of compliance date, emission levels, and equipment operation and maintenance.

9. Firewood Moisture Control

3.3

A strong education program is needed on proper firewood seasoning. Variable firewood cutting

Control Measures

Projected Air Quality
Benefit (ug/m³)
1984 1992

fees should be used as incentives for Spring cutting to provide 6-8 months minimum seasoning prior to burning. The Forest Service and BLM should evaluate the identified alternatives and implement the most appropriate program for shifting wood cutting to the Spring months and making dry material available to the public. The effectiveness of this program should be evaluated by July 1, 1984.

10. Commercial Firewood Moisture Regulation

0.9

The Forest Service and BLM should outline a specific program for commercial firewood cutting consistent with the objectives of #9 above. Greater flexibility in cutting times may be possible with commercial cutters because of the smaller number of persons and firewood sale areas involved. Oregon law requires firewood advertisements quoting a price to also express quantity in units of a cord or fractional parts of a cord. Ads must also identify the species of wood and whether the wood is unseasoned (green) or dry.

11. Wood Stove Design Standards

Several*

A testing methodology, emission standard and certification program should be established as soon as possible. An emission standard of 5 g/kg appears to be achievable. DEQ should develop the wood stove testing methodology, emission standards and certification program by January 1982. New stoves should be required to meet an adopted emission standard by January 1984 in order to be sold in Oregon.

12. Weatherization

Existing and new homes should be required to meet minimum weatherization standards in order to install a new wood stove. Weatherization standards should be based on the typical cost effective recommendations of energy audits: R-30 attic insulation, R-19 floor insulation, weatherstripping and possibly storm windows. See Energy Conservation Alternative #19 (attached).

Control Measures

Projected Air Quality
Benefit (ug/m³)
1984 1992

While developing this policy, the Board of Commissioners recognize that:

- a. A County ordinance will be required to implement this control measure,
- b. Two public hearings will be included in the ordinance process,
- c. An exemption clause is needed for hardship cases,
- d. Financial and energy audit assistance is available from utility companies,
- e. Weatherization is an essential component of the particulate strategy,
- f. Homes are generally more eligible for financial assistance if weatherized prior to the installation of a wood stove,
- g. Installation of a wood stove before weatherization can result in an unnecessarily oversized stove.

13. Weatherization

A local program should be established with the goal of weatherization of all AQMA dwellings within five years. Energy Conservation Alternatives #1-14 (attached) should be implemented as soon as possible.

If satisfactory progress is not made on voluntary weatherization, and if the primary particulate standard is not attained by July 1, 1984, then a mandatory program should be implemented. Some possible provisions of a mandatory program are outlined in Energy Conservation Alternatives #15-18 and 20-22.

14. Wood Stove Operation

A strong education program is needed on proper stove operation. Brochures prepared in Portland and Missoula would be useful if modified to be

Control Measures

Projected Air Quality	
Benefit (ug/m ³)	
<u>1984</u>	<u>1992</u>

specific for the Medford area. This information should be included in the firewood seasoning education program.

15. Installation Requirements (Stove Sizing)

As an information service the permit process for installation of a new wood stove should include an evaluation of proper stove sizing. A properly sized stove is essential for obtaining maximum benefit from weatherization and stove operation control measures.

16. Alternate Heat Source

New homes with a wood heating system should be required to have an alternate heat source. Due to the high potential for air pollution in the Medford area, the use of solar energy, electricity and natural gas for home heating should be encouraged.

17. Pollution Episodes

a. Residents of the Medford-Ashland AQMA should be requested to discontinue firewood use during air stagnation advisories if an alternate heat source is available. Firewood use should be prohibited when ambient levels of suspended particulates exceed the health standard (260 ug/m³) unless no alternate heat source is available. Curtailment of wood stove and fireplace use should become mandatory for those having an alternate heat source on ASA-days if the primary particulate standard is not attained by July 1, 1984. 2.8

b. In conjunction with the initiation of wood burning curtailment plan, the following curtailment plan for industry should be implemented: 0.1

- 50% curtailment during particulate alerts;
- 75% curtailment during particulate warnings; and
- 100% curtailment during particulate emergencies.

This curtailment plan package is the most practical and equitable for dealing with particulate pollution episodes and must be approved as a package rather than as single components.

Control Measures

Projected Air Quality
Benefit (ug/m³)
1984 1992

18. Open Burning

0.1

Open burning of nonagricultural waste in the Medford-Ashland AQMA should not be allowed on days when the maximum ventilation index (VI) is less than 400; open burning of agricultural waste should not be allowed on days when the maximum VI is less than 180. (About 160 days per year have VI greater than 400; about 240 days have VI greater than 180.) Open burning of nonagricultural wastes will not be allowed in the AQMA from December 1 to January 31. The public should be advised that open burning may also be restricted for substantial periods during the fire season (typically June to October) based on fire safety criteria.

19. Slash Burning

The Oregon Department of Forestry is responsible for the Oregon Smoke Management (SMP). The SMP regulates slash burning on all forest lands of the summit of the Cascades and portions of the Mt. Hood and Deschutes National Forest east of the Cascades. Other forest lands, some of which are relatively close to Medford and can cause slash burning impacts, are not subject to the SMP. Examples of such forest lands are the Winema National Forest (east toward Klamath Falls) and the Six Rivers, Klamath, Shasta-Trinity and Modoc National Forests (south in northern California).

- a. The Forest Service, State Forestry or others involved routinely in the monitoring of slash smoke intrusions should document observed intrusions from forest lands outside the SMP area.
- b. An inter-state agreement (or inter-region agreement between Regions 5 and 6 of the Forest Service) should be developed to insure that slash burning on public and private lands in northern California is managed to prevent smoke intrusions in the Medford-Ashland area.
- c. The Winema National Forest (and private land within this area) should be included in the SMP area and subject to the SMP requirements.

Control Measures

Projected Air Quality	
Benefit (ug/m ³)	
<u>1984</u>	<u>1992</u>

20. Energy Subsidy (Elderly Only)

Project Warm is a program, under ACCESS Inc., that provides free home weatherization to low-income citizens of Jackson and Josephine Counties with priority to senior citizens. It is funded through federal grants that are administered by the Oregon State Community Services Program. Project Warm provides evaluation of homes for energy saving weatherization needs and provides attic insulation, weatherstripping and caulking, storm windows, or minor roof repairs and hot water tank covers.

In addition to this weatherization program, some federal funds have been disbursed through ACCESS Inc. to pay for electricity, natural gas, oil or wood for low income families. Funding for these energy subsidies is questionable from year to year. It results in only temporary economic relief and no reduction in energy use.

It is recommended that funds formerly used for energy subsidies be used to strengthen weatherization programs such as that administered by Project Warm which result in permanent reductions in dollar cost, energy use and particulate emissions.

21. Retrofit Wood Stove Controls

Several*

Several add-on control devices are now being marketed which claim to increase efficiency, reduce particulate emissions and reduce creosote buildup. Costs range from \$80 - \$320. Further development is expected in the next few years.

A steel mesh filter retrofit device was tested by DEQ and showed some promise in reducing emissions. Another device which includes a catalytic combustion system will be tested by EPA in the next few months.

a. It is not recommended that retrofit control devices be required at this time.

Control Measures

Projected Air Quality
Benefit (ug/m³)
1984 1992

b. Research and development of retrofit control devices should be encouraged. Safety standards should be established for proper installation.

22. Solar Access & Orientation

0.25

0.5-1.0*

The Medford-Ashland area is one of the best areas in the Pacific Northwest for utilization of solar energy. There can be a significant energy contribution from available solar radiation by simply orienting structures properly, even if they are not specifically designed to utilize solar energy.

The Governor's Solar Task Force (1980) indicated that solar energy can contribute about 15% of a home's yearly space heating needs by simply orienting a new home to the sun and guaranteeing solar access. Optimum solar orientation for this area involves orienting the long axis of the structure on an east-west alignment and facing within 20 degrees east or 20 degrees west of true south.

The solar energy contribution would reduce fuel use and in the case of wood-oil or gas heated homes, would reduce particulate emissions. The "no-cost" modification of proper solar access and orientation has economic, energy and air quality benefits.

The siting of new homes in Jackson County should include consideration of proper solar orientation. Optimum solar orientation should be required where practicable. Property access to available solar energy should be protected. Education on passive solar energy options should be expanded.

ENERGY CONSERVATION ALTERNATIVES

EDUCATION

1. Establish an aggressive energy conservation marketing program outlining the energy, economic and air quality benefits of weatherization (e.g. Portland Energy Conservation Project, Seattle City Light Comprehensive Residential Weatherization Program).
2. Expand information on passive solar energy (e.g. SUNERGI, PP&L and other sources).
3. Expand advertising of existing low or no interest loan programs, tax credits, rebates, free weatherization for low income families (e.g. PP&L, CP National, Project Warm, Oregon tax credits and federal tax credits).
4. Establish a local "one-step" energy conservation center (e.g. Portland City's Energy Office, Seattle Home Insulation Programs Office).

INCENTIVES

5. Expand staff and services of existing utility weatherization programs to reduce delays and increase participation.
6. Provide state financial backing of no interest loans program available to all dwellings regardless of heat source.
7. Increase tax credit authorization for weatherization (e.g. HB2091); expand to include renters.
8. Establish an energy audit service available to all dwellings regardless of heat source (e.g. Residential Conservation Service as outlined in the National Energy Conservation Act of 1978).
9. Base energy conservation standards or energy audit recommendations on cost-effective (10-year payback) criteria (e.g. SB36).
10. Establish grants to elderly and low income for weatherization (e.g. SB37).
11. Modify and reinstate Oregon low interest loan programs (e.g. SB114).

TRANSITION: VOLUNTARY/MANDATORY

12. Establish advisory energy conservation standards for dwellings; review voluntary compliance after 2 years (e.g. HB2248).

13. Establish local policy to weatherize all dwellings within 5 years; review progress of voluntary program after 2½ years and establish mandatory program if necessary (e.g. Seattle City Light); hold public vote (e.g. Portland).

MANDATORY ACTIONS

14. Require energy audit including energy efficiency rating (EER) prior to sale of dwelling (e.g. Springfield).
15. Require weatherization to cost-effective level (10-year payback) prior to sale of dwelling (e.g. SB36, SB254).
16. Require energy audit prior to rental of dwelling.
17. Require weatherization to cost-effective level prior to rental of dwelling (e.g. SB36, SB254).
18. Require energy audit prior to installation of new wood stove.
19. Require weatherization of cost-effective level prior to installation of new wood stove.
20. Require weatherization of wood-heated dwellings to cost-effective level within 5 years.
21. Require weatherization of all dwellings to cost-effective level within 5 years.
22. Require weatherization of all dwellings to cost-effective level within 3 years.

Attachment 3

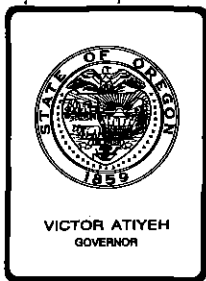
Medford-White City Particulate Strategy

IMPLEMENTING AGENCIES AND MECHANISMS

<u>Control Measure</u>	<u>Implementing Agencies*</u>				<u>Mechanisms</u>
	<u>Ci</u>	<u>Co</u>	<u>St</u>	<u>Fe</u>	
1. Trackout Controls	Ci	Co	St		Specific City/County/ODOT trackout rules, commitment to enforce.
2. Street Sanding/Sweeping	Ci	Co	St		ODOT/County commitments to modify programs, City reinforcement of existing program.
3. Paving Unpaved Roads/Shoulders	Ci	Co			MATS adoption and City incentive program/budget.
4. Fugitive Emissions Control			St		OAR requiring specific plantsite plans/compliance.
5. Operation and Maintenance Program			St		OAR requiring specific O&M plans/compliance.
6. Air Conveying System Mass Emission Limit			St		OAR outlining mass emission limit for cyclones.
7. Upgraded Veneer Dryer Controls			St		OAR requiring upgraded veneer dryer controls.
8. DEQ Enforcement			St		Additional compliance assurance.
9. Firewood Moisture Control			St	Fe	Interagency agreements w/USFS-BLM-DOF-DEQ.
10. Commercial Firewood Control			St	Fe	Interagency agreements w/USFS-BLM-DOF-DEQ.
11. Wood Stove Design Standards			St	Fe	Methodology, standards & certification program.
12. Weatherization (New Wood Stoves)	Ci	Co			Local weatherization programs, building codes.

<u>Control Measure</u>	<u>Implementing Agencies*</u>				<u>Mechanisms</u>
	<u>Ci</u>	<u>Co</u>	<u>St</u>	<u>Fr</u>	
13. Weatherization (Existing Homes)	Ci	Co			Local weatherization programs, commitments.
14. Wood Stove Operation			St		Educational program (DEQ lead, also DOE).
15. Installation Req'ts (Stove Sizing)	Ci	Co			Local building codes.
16. Alternate Heat Source	Ci	Co			Local building codes.
17. Pollution Episode Curtailement	Ci	Co			Local ordinances.
18. Open Burning Control		Co	St		OAR change (more restrictive criteria, 2-month ban).
19. Slash Burning Control			St	Fe	Interagency agreements.
20. Weatherization Grants (Elderly/Low Income)			St	Fe	Shifting of federal/state funding.
21. Retrofit Wood Stove Controls			St	Fe	Research, development, testing, promotion.
22. Solar Access & Orientation	Ci	Co			Local building codes.

* Key: Ci=Cities, Co=County, St=State, Fe=Federal



Environmental Quality Commission

Mailing Address: BOX 1760, PORTLAND, OR 97207

522 SOUTHWEST 5th AVENUE, PORTLAND, OR 97204 PHONE (503) 229-5696

MEMORANDUM

To: Environmental Quality Commission

From: Director

Subject: Agenda Item O, January 22, 1982, EQC Meeting
Informational Report: Attorney General's Opinion Concerning
Solid Waste Disposal and Resource Recovery from Solid Waste

Background

The following report is being presented at the Department's initiative to inform the Commission of a recent Attorney General's opinion and to seek the Commission's concurrence with the Department's intended course of action relative to this opinion.

ORS 459.005 broadly defines both "Solid Waste" and "Solid Waste Disposal" to include virtually all discarded materials and a wide range of waste management activities. For example, the definition of "Disposal Site" includes not only landfills, incinerators, etc., but also facilities where recycling, salvaging or reuse of solid waste occurs. Traditionally, however, the Department has limited its regulatory activities to the more conventional forms of solid waste disposal and has only attempted to regulate productive uses of solid waste where there is some clear threat to public health or the environment.

Recently the Department has received a number of complaints concerning an individual in Yamhill County, William C. Remoir, who is constructing a fence around his farm with scrap automobile tires. Also, the Solid Waste Division recently received several inquiries from entrepreneurs and regional staff regarding permit requirements for facilities which are producing fuel or other marketable commodities from scrap tires and for sites at which tires are being stored for such purposes. In addition, there has been a long standing debate concerning the degree to which the Department should regulate recycling and resource recovery from municipal solid waste in general.

In order to clarify legislative intent in these areas the Department requested and obtained a formal legal opinion from the Attorney General (copy attached). The opinion confirms that the Department has broad authority in the area of solid waste management and potentially could greatly increase both the number and types of activities which it regulates. For example, the Department apparently could regulate such things as newspaper collection boxes, the entire waste paper and scrap metal industry, the collection and reprocessing of beverage containers under the Bottle Bill, second hand or resale shops, Goodwill Industries, etc. In addition, the Department was advised that it could prohibit the landfilling of materials which are readily recyclable or reusable.

The Department obviously does not intend to exercise the full range of authority which this legal opinion suggests may be available. The opportunity to use discretion in the application of regulatory authority is well documented in legal precedent. Specifically, the Department intends to continue the current policy of routinely regulating the more conventional forms of "disposal" such as landfilling, open burning and incineration and not regulating productive uses of solid waste (i.e., "Resource Recovery" as defined in ORS 459.005) unless there is a potential threat to public health or the environment. For example, a facility processing municipal garbage would normally be regulated, but a paper baling operation would normally not be regulated.

In regard to the tire situation in Yamhill County, staff of the Willamette Valley Regional Office have inspected the site and confirmed that the accumulated tires are in fact being used to construct a fence by stacking and interlacing (some complainants initially alleged that Mr. Remoir was merely accepting tires for a fee and had no intention of constructing a fence). Also, the staff noted that the location of the property is such that tires are not likely to escape to public waters.

The staff did not observe mosquito breeding or any evidence that rodents were using the tires for harborage. This is not to say that such activities won't occur. It is the staff's opinion, however, that there are many other natural sources of mosquito breeding and rodent harborage in the area that would be equally attractive to vectors. In short, the staff do not believe that the presence of vectors in itself is cause for DEQ action. Nor is the fact that the tires, if ignited, can burn persistently and generate dense smoke necessarily a cause for DEQ action. Traditionally, vector control and fire control have been the responsibility of local agencies and/or other state agencies.

In general, the Department views the tire fence as a matter of land use and aesthetics rather than environmental quality. While we may sympathize with neighbors who find the fence unsightly and fear that it may adversely affect property values and/or be an additional source of vector problems, we have not found that the fence poses any significant threat to the environment. Therefore, we are proposing not to initiate any enforcement action against Mr. Remoir at this time, particularly in view of recent staff reductions.

Finally, Yamhill County recently adopted an ordinance specifically to regulate tire fences. We understand that Mr. Remoir applied for a permit to extend his fence under this ordinance and that the application was denied. We also understand that the county is not proposing to make Mr. Remoir remove or alter his existing fence.

For reasons similar to those related above, the Department is also proposing not to routinely require permits from other individuals who are using solid waste for productive purposes. The decision to regulate or not to regulate will be made on a case-by-case basis with environmental impact being the major consideration.

In regard to storage, the Department proposes to continue to consider the long term (more than six months) accumulation of solid waste of any type to constitute "disposal," unless the property owner or person in control of the waste can reasonably demonstrate that the material is being or will be used productively. Short-term accumulation of solid waste may also be subject to regulation if the nature, amount or location of the accumulated waste is such that, in the Department's opinion, it constitutes a potential environmental problem. In either case, such "disposal sites" may be required to obtain a permit or to otherwise comply with the Department's rules as circumstances so warrant. For example, at a site where tires are being accumulated and where there is no clear evidence that the tires will be used productively, the Department would typically require that some spacing be provided for fire protection and that the tires ultimately be buried or removed.

The issue of prohibiting the landfilling of readily recyclable solid waste is one that the Department is not prepared to deal with at this time. This concept is one that deserves considerable thought and deliberation. It is the Solid Waste Division's intent to explore it with industry, local government, our citizen's advisory group and others before proposing a course of action. The Department may be returning to the Commission in the near future to discuss this matter in greater detail.

Director's Recommendation

It is recommended that the Commission concur in the following course of action to be pursued by the Department:

1. Continue to regulate solid waste disposal in its traditional sense, including but not limited to landfilling, open burning, incineration and composting.
2. Continue to regulate "Resource Recovery" as defined in ORS 459.005 only where there is a potential threat to public health or the environment.
3. Not initiate any enforcement action at this time against Mr. William C. Remoir for construction of a tire fence, based on the information currently available to the Department.

4. Continue to regulate the storage of solid waste in cases where waste is stored for more than six months or where the nature, amount or location of the stored waste is such that, in the Department's opinion, it constitutes a potential environmental problem.
5. Explore the concept of prohibiting the disposal of certain readily recyclable materials at landfill sites with affected parties and report back to the Commission in the future.

Bill

William H. Young

Attachment: Attorney General's Opinion No. 8069

W. H. Dana:hc
SH202
229-6266
January 6, 1982



Attachment 1
Agenda Item O
1-22-82
E.Q.C. Meeting

DEPARTMENT OF JUSTICE

100 State Office Building
Salem, Oregon 97310
Telephone: (503) 378-4400

October 26, 1981

No. 8069

This opinion is issued in response to questions presented by
William H. Young, Director, Department of Environmental Quality.

FIRST QUESTION PRESENTED

Do land and facilities used for preparation for and construction of a livestock control fence consisting of used motor vehicle tires constitute a "disposal site" as defined by ORS 459.005(4)?

ANSWER GIVEN

Probably. The commission may make the determination in a contested case proceeding.

SECOND QUESTION PRESENTED

Do land and facilities used to receive and collect used tires from the public for use as raw material for the production of salable products from the used tires, constitute a "disposal site" as defined in ORS 459.005(4)?

ANSWER GIVEN

Yes.

THIRD QUESTION PRESENTED

Do land and facilities used to collect used cardboard, glass containers, metal cans and newspapers from the public, and to make salable products from these materials, constitute a "disposal site" as defined in ORS 459.005(4)?

ANSWER GIVEN

Yes.

FOURTH QUESTION PRESENTED

Do land and facilities used to receive loads of mixed used materials, such as cardboard, glass containers and metal cans, to sort the materials to extract the materials having economic value for sale, and to ship the residue to a permanent disposal site constitute a "disposal site" as defined by ORS 459.005(4)?

ANSWER GIVEN

Yes.

FIFTH QUESTION PRESENTED

Does the burden belong to the Department of Environmental Quality (department) and Environmental Quality Commission (commission) or to the operator of a site such as described in questions 1 to 4, to prove that a material received by the operator at the site is or is not solid waste?

ANSWER GIVEN

The department and commission, in order to exercise their regulatory authority over solid waste, must be prepared to prove that the material in question is solid waste and that the site in question is a disposal site. However, any person relying upon an exclusion from a definition relating to solid waste has the burden of proving qualification for the exclusion.

SIXTH QUESTION PRESENTED

Do the department and commission have authority to prohibit landfills from receiving materials which are readily recyclable or reusable, on the ground that

landfilling is not the best available management practice for those materials?

ANSWER GIVEN

Yes.

DISCUSSION

We are first asked whether land and facilities used for preparation for and construction of a livestock control fence from used motor vehicle tires constitute a "disposal site" as defined by ORS 459.005(4).

ORS 459.205 requires that a permit be obtained from the department before a disposal site may be established. "Disposal Site" is defined by ORS 459.005(4), which provides:

"Disposal site' means land and facilities used for the disposal, handling or transfer of or resource recovery from solid wastes, including but not limited to dumps, landfills, sludge lagoons, sludge treatment facilities, disposal sites for septic tank pumping or cesspool cleaning service, transfer stations, resource recovery facilities, incinerators for solid waste delivered by the public or by a solid waste collection service, and composting plants; but the term does not include a facility subject to the permit requirements of ORS 468.740; a landfill site which is used by the owner or person in control of the premises to dispose of soil, rock, concrete or other similar nondecomposable material, unless the site is used by the public either directly or through a solid waste collection service; or a site licensed pursuant to ORS 481.345." (Emphasis added.)

The definition includes land and facilities used for the disposal, handling or transfer of solid waste or for resource recovery from solid waste. Resource recovery is the process of obtaining useful material or energy from solid waste. ORS 459.005(9).

The definition of the term "solid waste" is not an easy task.

ORS 459.005(11) provides:

"'Solid Waste' means all putrescible and nonputrescible wastes, including but not limited to garbage, rubbish, refuse, ashes, waste paper and cardboard; sewage sludge, septic tank and cesspool pumpings or other sludge; commercial, industrial, demolition and construction wastes; discarded or abandoned vehicles or parts thereof; discarded home and industrial appliances; manure, vegetable or animal solid and semisolid wastes, dead animals and other wastes; but the term does not include:

"(a) Hazardous wastes as defined in ORS 459.410.

"(b) Materials used for fertilizer or for other productive purposes or which are salvageable as such materials are used on land in agricultural operations and the growing or harvesting of crops and the raising of fowls or animals." (Emphasis added.)

"Solid waste" is a subcategory of "waste." "Waste," as defined at ORS 459.005(14), consists of "useless or discarded material." (Emphasis added.) All materials categorized as "solid waste," as defined in ORS 459.005(11), must necessarily be "useless or discarded." 39 Op Atty Gen 772 (1979).

Though the phrase "useless or discarded" is used to define the term "waste," it is nowhere itself defined. In Springfield Education Assn. v. Springfield School District No. 19, 290 Or 217, 621 P2d 547 (1980), the court described three classes of statutory terms and discussed the authority of agencies to interpret terms of each class. The three classes are:

"1.) Terms of precise meaning, whether of common or technical parlance, requiring only factfinding by the agency and judicial review for substantial evidence;

"2.) Inexact terms which require agency interpretation and judicial review for consistency with legislative policy; and

"3.) Terms of delegation which require legislative policy determination by the agency and judicial review of whether that policy is within the delegation." Id. at 223.

We believe that the term "useless" is at least of the second class, and possibly of the third. The term "discarded" is probably of the first class, but possibly of the second. In discussing the second class of terms the court said:

". . . Where the applicability of the term is not certain, its meaning is not a question of lexicography, but rather a question of the policy which is incorporated in the legislative choice of that word. The processes of administrative application of such terms and judicial review must be performed to effectuate the complete legislative policy judgment which such terms represent." Id. at 226.

In discussing the third class of terms the court said:

". . . The task of the agency administering such a statute is to complete the general policy decision by specifically applying it at retail to various individual fact situations. . . .

". . . .

". . . The discretionary function of the agency is to make the choice and the review function of the court is to see that the agency's decision is within the range of discretion allowed by the more general policy of the statute. . . ." Id. at 228-229.

Though the breadth of permissible agency interpretation and the scope of judicial review varies from class to class, under Springfield, the touchstone remains the policy behind the legislation. The legislature has sought to explain the policies behind ORS 459.005 - 459.285 in ORS 459.015. The commission is

in a far better position to assess and apply these policies than are we. As an aid to the commission in defining the term "solid waste," however, we make the following observations.

Generally, the term "waste" includes manufactured articles which are useless for the original purpose for which they were made and are fit only for either: (1) remanufacture into something else; or (2) some other use which differs substantially from their original use for which they are no longer fit. Studner v. United States, 300 F Supp 1394 (Cust Ct 1969). There is of course a third category, of articles which are useless for their original and any other purpose.

In Studner, a customs case, the defendant was involved in the importation of used print rollers. The print rollers were to be used not for their original purpose, but rather as bases for a variety of objects including lamps, trophies and smoking stands. Before being imported, one end of the rollers was straight cut. Before use as bases for these objects, another straight cut was usually required. The defendant sought to have the print rollers classified as "waste" in order that their import would be subject to a lower tariff than if they were classified as wholly or partially manufactured goods.

The Customs Court held that the blocks were "waste" and should not have been taken out of that classification merely because they could be used for another purpose without remanufacture. In coming to this conclusion, the court stated:

"In the instant case, the print blocks were incapable of use for their original purpose and were 'waste' as far as their use in printing was concerned. They would have been considered 'waste' if another use had been found for them that involved remanufacture. The use to which they are in fact put differs substantially from their original use. . . . It would be illogical to hold that 'old waste', such as this merchandise, has been taken out of the classification, waste, merely because it can be used for another purpose without remanufacture." Id. 1398.

We believe that it is with reference to the prior owner, not the operator of the alleged disposal site, that uselessness is probably determined. In Kirksey v. City of Wichita, 103 Kan 761, 175 P 974 (1918), the court stated that:

"The words 'rejected' and 'waste,' as used in connection with garbage material, carry practically the same implication, indicating material that has lost its value for the purposes for which it was handled by the owner and been cast aside." (Emphasis added.)

We recommend that in order for a material item to be classified as "useless and discarded," it be established that:

1. The item has lost its value for the purposes for which it was intended by the prior owner; and
2. It is fit only (if for anything) for:
 - a. remanufacture into something else; or
 - b. some other use which differs substantially from its original use.

Thus, in order to classify material as "solid waste," it must be:

1. "Useless or discarded"; and
2. Included within the list of items set forth at the beginning of ORS 459.005(11), or a like item; and
3. Not fall within the exceptions specified in ORS 459.005(11)(a) or (b).

Applying these tests to the tires in question, we find on the facts presented to us that the tires are "waste." They probably do not have value as recappable tires and are therefore "useless" for their originally intended purpose, that is, as vehicle tires, and in any event they have been "discarded" for that or any similar use. Use as a livestock control fence is certainly substantially different from the original use.

The second test is whether they are "solid waste" as defined in ORS 459.005(11). In our opinion, a tire is a vehicle part, essential to its operation to the same extent as an engine, transmission or axle, and thus specifically within the definition when discarded or abandoned. Even if held to be not a "part" but an "accessory," if there is a difference, the statute covers items "including but not limited to" discarded vehicle parts. The word "including" in a statute is a word of enlargement, or of illustrative application, as well as of limitation. Premier Products Co. v. Cameron, 240 Or 123, 400 P2d 227 (1965). Thus under the rule of ejusdem generis, the definition extends to discarded tires which are clearly of the same type or general class as any other discarded vehicle part. See State v. Brantley, 201 Or 637, 271 P2d 668 (1954); Skinner v. Keeley, 47 Or App 751, 615 P2d 382 (1980).

The third test is applicability or nonapplicability of the exceptions set forth in ORS 459.005(11)(a) or (b). The only possibly applicable exception is use of the tires for "productive purposes . . . in . . . the raising of fowls or animals." ORS

459.005(11)(b). An exception from a statutory definition is generally to be narrowly construed. Jensen v. Garvison, 241 F Supp 523 (D Or 1965); Aaker v. Kaiser Co., 74 F Supp 55 (D Or 1947). It would be a very broad construction of ORS 459.005(11)(b) to interpret it to exclude discarded or abandoned vehicles or parts thereof (or any of the other listed wastes) if used as livestock fencing. The commission may conclude that such a use would be inconsistent with the policies behind ORS 459.005 to 459.285.

The term "productive purposes" in this context appears to be an inexact term, the second category in Springfield Education Assn v. Springfield School District No. 19, supra, which requires agency interpretation consistent with legislative policy. As the statute is worded, the legislative policy appears to have been to exempt waste materials which produce crops or livestock, (i.e., are used as fertilizer, feed or the like) from the category of "solid wastes." Within the context of the statute, the term "productive" does not seem to include the use of tires for a fence to confine livestock. Tires therefore probably ought not to be exempt from solid waste classification when used for this purpose.

Inexact terms may be defined by the agency within the scope of a contested case proceeding. Prior rulemaking is not required. Springfield Education Assn., supra, 290 Or at 226. It is therefore appropriate for the agency to interpret the statute in such a contested case proceeding, to determine the meaning the

legislature intended for the term "productive" and to determine whether livestock fencing was intended to be included as a "productive" use.

If, however, after examining the available evidence as to legislative intent, the agency determines that the legislature may have intended or did intend to delegate to the agency authority to make its own determination as to what is a productive use, the agency may under ORS 183.355(5) nevertheless do so in the contested case proceeding without delay for rulemaking.

ORS 183.355(5) provides that:

". . . if an agency, in disposing of a contested case, announces in its decision the adoption of general policy applicable to such case and subsequent cases of like nature the agency may rely upon such decision in disposition of later cases."

This clearly contemplates that contested cases need not be held up because of a conclusion, in a borderline case, that the legislature has placed policy-making discretion in the agency which should be exercised by rule. A rule should always be adopted first, if it comes to the attention of the agency that such a delegation to it has been made. This is not always possible, however. It is recommended, although not statutorily required, that such a policy decision made in the course of a contested case hearing be followed up by adoption of a confirming rule.

It may not be necessary in the particular case to determine whether use as livestock fencing is or is not a "productive

purpose" within the legislative intent, or whether the legislature intended to delegate responsibility to the agency to decide the question. It is represented to us that in the particular case as many as 200,000 tires, for which disposal fees have been received, are involved; and that the use as "livestock fencing" is merely a subterfuge. If the agency so finds on the basis of the evidence, it would be unnecessary for it to determine the scope of the term "productive purpose."

Should the commission conclude that the used tires are within the definition of "solid waste," it follows that the land and facilities used for their disposal, handling or transfer, or for recovery of resources from them, would be a "disposal site" unless the site falls within the exceptions listed in ORS 459.005(4). The exceptions, however, are not applicable under the facts involved in this question.

The fact that tire disposal fees are sometimes collected by individuals apparently is not determinative in answering the first question. The same answer would probably be reached whether or not a fee is collected for the disposal of the used tires. A disposal charge, at most, is a further indication that the materials are useless or discarded and are solid waste.

We do not reach, in this opinion, the question of applicability of the statute to land and facilities used for disposal, handling and transfer of "trade in" tires. The former owner may or may not have received a "trade in" allowance on the price of new tires purchased. A tire may be reusable, perhaps

after repair, or it may be recappable, and thus not "useless" because still fit for its original or a similar purpose. Other tires may be useless as tires, and therefore "useless." The status of many of the tires may not have been determined by the owner. In such a context, it seems likely that it would be held to be the agency's responsibility to adopt rules consistent with the legislative policy to determine whether or when such tires are to be deemed to be or to become useless, and thus solid waste. That is to say, the term "useless" in such a context is a term of delegation under Springfield Education Assn v. Springfield School District No. 19, supra. Of course, once the tires are factually determined to have been rejected for any future use as tires, they are "discarded" and outside any such delegation of discretionary rulemaking power.

The above discussion is, for the most part, applicable to the second question presented as well. It asks whether land and facilities used by a firm to receive and collect used tires for use as raw material for the production of salable products constitute a "disposal site." We conclude that they do because they are used for disposal, handling, transfer of and recovery of resources from tires no longer fit for vehicle use. The exceptions in ORS 459.005(11)(a) and (b) are clearly inapplicable.

The third and fourth questions presented can be handled similarly. The third question asks whether land and facilities used to collect used cardboard, glass containers, metal cans and

newspapers from the public and to make salable products from these materials is a "disposal site." The fourth question presented asks whether land and facilities used to receive similar loads of mixed used materials, to sort the materials, extracting those of value for sale and shipping the residue to a permanent disposal site is itself a "disposal site." We believe both are disposal sites.

We note that such groups and firms sometimes pay the public for these materials, in recognition of their salvage value. This does not necessarily mean that the materials are not essentially useless to or discarded by the disposers. The materials may still be classified as solid waste.

Our answers to questions three and four are not intended to cover the case in which reusable and repairable clothes, appliances, furniture and other items are solicited and received. In such cases most of the material is still intended to be used for its original purposes, and much of it can again be used for its original purposes. The donors' intention may be to discard, or it may be no more to discard than in the case of a donation of money. Some and perhaps much of the material will in fact be useless. We suggest that as applied to this situation the term "discarded" would again be a term of delegation, in the third category under Springfield Education Association.

The answers to the first four questions are not different if the receivers of the solid waste merely accumulate it in anticipation of eventually finding a use or market for it.

Fifth, we are asked whether the department and the commission or the operator of an alleged disposal site has the burden of proving the character of alleged solid waste received by the operator at the site. The general rule is that the burden of proof rests on the party who has the affirmative of the issue. Gibson v. Gibson, 216 Or 622, 340 P2d 190 (1959). The burden falls on the party that would be unsuccessful if no evidence at all were presented. Pacific Portland Cement Co. v. Food Machinery and Chemical Corp., 178 F2d 541 (9th Cir 1949). Generally, this is the plaintiff. McCaffrey v. Glendale Acres, Inc., 250 Or 140, 440 P2d 219 (1968), held, in accordance with the general rule, that a party has the burden of proof as to those issues as to which it has the affirmative, although plaintiff has the burden of proof as to all the elements of its claim or cause of action.

The department and commission, constituting a regulatory agency of the state, can only exercise such authority as is granted to them by law. Morse v. Oregon Division of State Lands, 34 Or App 853, 856-857, 581 P2d 520 (1978) aff'd 285 Or 197, 590 P2d 709 (1979). Thus, to regulate, the agency must be prepared to demonstrate such authority, including proof that the subjects sought to be regulated come within the definitions in the laws authorizing regulation by the agency.

Persons seeking to avail themselves of exclusions from legal definitions, however, are in a better position to prove affirmatively the facts allegedly qualifying them for the

exclusion than is the regulatory agency to prove the negative of such facts, especially when these facts are uniquely within the knowledge of such persons seeking to so qualify. Therefore, the law places the burden of proof on the persons seeking qualification under the exclusion from the definition.

Sixth, we are asked whether the department and commission have authority to prohibit landfills from receiving materials which are readily recyclable or reusable on the ground that landfilling is not the best available management practice for these materials. ORS 459.015 declares as state policy the establishment of a comprehensive statewide program for solid waste management which will promote means of preventing or reducing at the source, materials which otherwise would constitute solid waste; and application of resource recovery systems which preserve and enhance the quality of air, water and land resources. ORS 459.015(9), (10); see ORS 459.057 (presenting an example of the implementation of such policies).

The commission is required to adopt reasonable and necessary solid waste management rules governing the accumulation, storage, collection, transportation and disposal of solid wastes. ORS 459.045. Landfills are specifically included in the statutory definition of "disposal sites" in ORS 459.005(4), and disposal sites are subject to regulation by department permits. ORS 459.205.

We conclude that the commission, by rule consistent with legislatively declared state policy, and the department, by

permit regulation pursuant to commission rules, may prohibit landfills from receiving materials that are readily recyclable or reusable on the ground that landfilling is not the best available management practice for those materials. Any such rule must contain clear standards as to what materials landfills may not receive, in order that the rule may be effectively implemented.



Dave Frohnmayer
Attorney General

DF:RPU:jo



STATE OF OREGON

INTEROFFICE MEMO

TO: Bill Young ^{why} cc: Dyke Mace, YCSWC
cc: Solid Waste Div.

DATE: January 14, 1982

FROM: Gary Messer, WVRS

SUBJECT: SW-Remior Tire Fence
Yamhill County

On January 13, 1982, I met Mr. William Remior and inspected his property to determine the nature and extent of his tire fencing project. The field review consisted of physically observing all tire fencing constructed to date plus looking over the entire acreage for stockpiles of tires which were allegedly being discarded in canyons, drainageways, and forested areas. Based on this review, I can answer the following questions:

- 1. How large an area is Mr. Remior fencing?

Mr. Remior's property is approximately 200 acres in size. To date he has fenced or partially fenced most of the perimeters of his property, plus established three interior cross-fences to divide off pasture areas.

- 2. How many tires are involved in the present fencing?

To date there are approximately 14,500 feet of completed or partially completed tire fencing. I estimated that the fencing is comprised of approximately 60% truck tires and 40% car tires.

By measurement of completed fencing areas, there are approximately 15 truck tires per completed 10 foot length of fence or 27 car tires per completed 10 foot length of fence.

Using the above estimates:

14,500 feet of fencing		14,500 feet of fencing
<u>x 60% truck tires</u>		<u>x 40% car tires</u>
8,700 feet of truck tire fencing		5,800 feet of car tire fencing

<u>15 truck tires</u>	<u>x truck tires</u>	
10 feet of fencing =	8700' of fencing	= 13,050 truck tires

<u>27 car tires</u>	<u>x car tires</u>	
10 ft. of fencing =	5,800' of fencing	= 15,660 car tires

13,050 truck tires
15,660 car tires
 28,710 approximate total number of tires in existing fencing.

2500 stocked but not incorporated into fencing as yet
 31,210

*NOTE: I realize previous estimates have been made which indicated there may be somewhere between 100,000 and 200,000 tires on the property. At first glance, I can understand those high estimates, as I would have thought the same. I am not aware of anyone previously confirming these estimates by physical measurements or calculations.

3. Are the tires merely being dumped or are they actually being used as fencing?

The tires are being used as fencing. The tires are being placed in a manner in which they are interwoven and interlocked at an approximate angle of 30°. It is obvious that a lot of time has been spent in placement and construction of the fencing.

4. Are there large accumulations of tires stockpiled or being dumped on the property that are not being used for fence construction?

There are several areas on the property where tires have been stacked and/or placed, but all are adjacent to partially completed fencing areas. These areas are scattered and individual tire concentrations range from 20 in some areas to as high as 200 in others. The largest accumulations of stockpiled tires are along the western property line, but most of these have been stacked except for one pile near the property access road off County Road 244. Without making an exact count, I estimate there are approximately 2500 tires on the property now which have not been incorporated into fencing.

In regard to allegations that Mr. Remior has been dumping thousands of tires in canyons, drainageways, and forested areas, this is not occurring. I physically inspected and walked over the entire property and found no accumulations other than those described above.

5. How visible is the tire fencing?

The tire fencing along CR 244 is easily visible, as well as one cross-fence that has been constructed in a permanent pasture adjacent to CR 244. Most of the remaining tire fencing is visibly screened by terrain and/or forest.

In regard to the fencing along CR 244, Mr. Remior has planted Douglas fir seedlings to provide a future site screen.

6. What potentials exist for vector harborage?

The completed fencing areas are approximately 4 1/2 feet high and only one tire width wide. As noted previously, they are stacked in an interlocking manner at an approximate 30° angle. This in itself does not

appear to provide much of a rodent harborage, whereas a large pile of randomly discarded tires would. We have received reports of rats; however, Mr. Remior does run a livestock operation on his property. The confined animal holding and feeding operations appear to provide a much greater potential for rodent attractant and harborage than the tire fence.

There has also been concern over the creation of potential mosquito breeding habitats. Obviously, this cannot be confirmed during this season of the year. Whether the mosquitos would choose to use the tires over their naturally available breeding areas such as creeks and stock ponds on the property, or to what degree, cannot be determined.

7. What potential exists for fire hazards?

As noted previously, the tire fence has been constructed to a height of approximately 4 1/2 feet and only one tire width wide. The potential for spontaneous combustion under these circumstances is remote.

It appears the only potential for fire would be if the tires were deliberately ignited. Perhaps a more informative fire hazard potential could be obtained from a local fire marshall.

8. How much more area does Mr. Remior wish to fence with tires?

There remain approximately 5,800 feet of partially fenced and unfenced areas remaining on the property that Mr. Remior wishes to fence. To complete his project, Yamhill County will require a permit. Currently, the County has denied a permit to complete the fencing; however, the decision has been appealed to the County Commissioners.

If you need answers to additional questions, please let me know.

Gary Messers
WR

WR

Attachment: Map of Wm. Remior property.

*5,800 ft of fencing remaining
to be done*

*range of tires
1.5 per ft to 2.7 per ft =
8,700 to 15,660 tires*

BLUEPRINT IN FILE



WILLIAM REMIOR PROPERTY
YAMHILL COUNTY
TIRE FENCE

—x—x—x—x— COMPLETED OR PARTIALLY COMPLETED
TIRE FENCING

⊗ STOCKPILES OF TIRES GENERALLY
NEED TO PARTIALLY COMPLETED
FENCING AREAS

———— PROPOSED FUTURE TIRE FENCE
AREAS

GARY MESSER 1/13/82

SEE SEC. 3 5 01

REPLY TO:

January 21, 1982

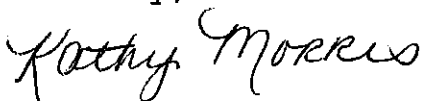
Environmental Quality Commission
Box 1760
Portland, OR 97207

Dear Commissioners:

We appreciate the opportunity to come before the Commission this morning to recognize an individual who has done so much for Oregon's on-site sewage program. As DEQ's Chief Soil Scientist for the past 7 years, Bob Paeth has been intimately involved in the on-site program. He has conducted numerous soils workshops and provided invaluable training to sanitarians throughout the state. He has also worked with Oregon State University to include more soils courses in the environmental health curriculum.

On behalf of the Oregon Environmental Health Association, it is my pleasure to present this certificate of appreciation to Bob for his outstanding efforts in the continuing education of the sanitarians of the state of Oregon.

Sincerely,



Kathy Morris, R.S., President
Oregon Environmental Health Association

klb

cc: Bill Young, Director, DEQ
Bob Paeth, Ph.D., Chief Soil Scientist, DEQ



STATE OF OREGON

INTEROFFICE MEMO

To JFK Item J EWC Young Gillaspie Downs Biles

TO: Environmental Quality Commission
c/o Jack Weathersbee
Department of Environmental Quality
FROM: Max Bader, M.D., M.P.H.
Oregon State Health Officer
Health Division

DATE: January 15, 1982
State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
JAN 18 1982

SUBJECT: Proposed Residential Coal Rules - January 13, 1982

AIR QUALITY CONTROL

I have reviewed the proposed residential coal rules set forth in the January 13, 1982 memorandum from the Department of Environmental Quality. The rules seem clear and should suffice to solve the problem they were to address. I therefore support their adoption. I see no reason why the exemption process for current coal users can't work satisfactorily. It does not appear to place any paperwork requirements on coal dealers that would constitute a hardship or pose difficulty in easily making judgments about who should get coal. Policing of the issue through the dealers would seem to be adequate, and, if they maintain a basic integrity in making the system work, there should be very few problems and no threat to air quality. If the dealers and public choose to grossly violate the rule and its purpose is ignored, you will be faced with a situation calling for Legislative action to remedy it. I doubt that this will ensue.

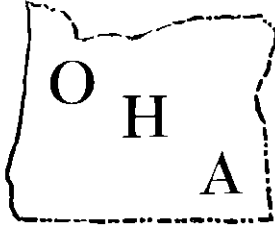
MB:srr

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
JAN 19 1982

OFFICE OF THE DIRECTOR

OREGON HOMEOWNER'S ASSOCIATION



2212 S.E. Lambert
Portland, Oregon 97202
Phone: Area Code (503) 233-4841

January 22, 1982

Chairman,
Environmental Quality Commission,
522 S. W. 5th Ave.,
Portland, Oregon, 97204.

Dear Mr. Chairman:

Our Board of Directors has reviewed your proposed rules to limit the sulfur and volatile matter of coal sold for direct space heating, 340-22-020 after July 1, 1972.

Our Board of Directors has instructed that you be advised as follows:

"The Board of Directors of the Oregon Homeowners Association strongly objects to this proposal as written and request that the matter be referred to the Governor's Office, President of the Senate and Speaker of the House, for their approval, and reference to members of the State Legislature now in session."

"We strongly object to the remote possibility of any public agency telling us you have a right, without warrant, to come into our homes to test what is being burned in the heating system or fireplace. We The Board believe this to be a strong constitutional question and would suggest to DEQ that a more detailed and simple english explanation of your intent on this bill be made in public hearings throughout the State of Oregon, with a corresponding economic impact study made to better inform the public of the State of Oregon."

This concludes the statement of the Board of Directors and as Chairman of the Board, I respectfully request that such be read into your minutes on this date of January 22, 1982.

Respectfully yours,

Clyde V. Brummell
Clyde V. Brummell,
Chairman of the Board.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JAN 22 1982

OFFICE OF THE DIRECTOR

Agenda Item F

Walters
Star Route South, Box 9X
Depoe Bay, OR 97341

January 15, 1982

Mr. Sherman O. Olson, Jr.
Assistant Supervisor
On-Site Sewage Systems Section
Water Quality Division, DEQ
P.O. Box 1760
Portland, OR 97207

Dear Mr. Olson:

As you know from a telephone conversation and earlier correspondence, we will neither be present at the Commission hearing on January 22, 1982, nor will we be represented by legal counsel, whose fees we could no longer afford. Instead, we will restate our case by this letter, which we request be read aloud in the hearing, for inclusion in the minutes. It will be supported by the appearance of Joan or Herb Hansen and possibly by other neighbors of Mr. Marvin Peters.

To put it plainly, we think DEQ's behavior has been disgraceful. As your memorandum documents, local officials have consistently denied septic system permits for Mr. Peters' property for two years, and for previous owners before that. They issued the permit only when ordered to do so by DEQ, and then against their better judgment. The Department's own Chief Soil Scientist and other staff members themselves raised serious questions about the possibility of installing any septic system on the lots.

Under continual pressure from Mr. Peters, the Department chose to interpret his appeal as a request for a variance. The procedure was highly irregular. Mr. Gary Messer, a Variance Officer, visited the site on June 23, 1981, and apparently suggested an unorthodox system, now labelled a "redundant sand filter system. . . . consisting of a combination of two alternatives from the rules." The following day he met with Mr. Peters, Mr. Peters' Soil and Land Use Consultant, and the County Sanitarian. As your memorandum states, Mr. Messer considered this "more of a review." Presumably in order to cover itself, DEQ now refers to this as a "public information type hearing," as required by law. It also tells us that interested neighbors were welcome to attend. Of course, we had no way of knowing that a gathering of four men, standing on the lots, might be such a meeting. It is absurd to think that a public hearing could be called on such short notice, without any attempt to inform interested parties, and to consider an unusual and newly proposed system. If that constitutes a public hearing the term has no meaning.

The results of DEQ's actions are deplorable. As Mr. Peters knew, the lots he purchased were considered impossible to build upon. Thanks to DEQ he has been able to construct a very large house, regarded as an eyesore by neighbors, located at the South end of the historic Ben Jones bridge. This is a part of the coast much visited by tourists, whose image of Oregon will not be improved by such a flagrant disregard of the environment. In order to install the system Mr. Messer suggested, Mr. Peters had to use large charges of dynamite, which may well have increased the bridge's already serious structural problems and which certainly disturbed neighbors, who

DEPARTMENT OF ENVIRONMENTAL QUALITY
JAN 19 1982

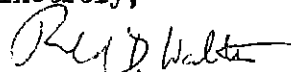
WATER QUALITY CONTROL

were not informed in advance and some of whose children were playing near by.


In addition, the lots upon which Mr. Peters' house rests have severe water flow problems, cited by state and local soil scientists, and are over a deep sea cave, nowhere apparent in geologists' statements but visible to the naked eye. This is not the place to try a new, untested septic system.

Finally, Mr. Messer and DEQ have shockingly abdicated their own responsibilities. They over-ruled local officials. They decided that an adequate public hearing can be held on the spur of the moment, even if the public has no way of knowing about it. They decided that their obligation is not to the environment but to help a persistent builder, no matter how destructive his project may be. An extremely ugly structure stands in a very beautiful part of the coast as a monument to Mr. Messer's and the Department's decision. We hope that neither it, nor the irregular procedures that led to it, will be allowed to stand as precedents.

Sincerely,



Ronald G. Walters



Charlotte Walters

cc: William H. Young
Max Rijken
Del Isham



Department of Environmental Quality

522 SOUTHWEST 5TH AVE. PORTLAND, OREGON

MAILING ADDRESS: P.O. BOX 1760, PORTLAND, OREGON 97207

August 21, 1981

Mr. Steve Johnson
Sand Trap Systems, Inc.
13980 SW Tualatin Valley Hwy., Unit 3
Beaverton, OR 97005

RE: SS-Installers
Sand Trap Systems, Inc.
DEQ Certification No. 35807
System Installation for Marvin
Peters Property, Lincoln County
Tax Lots 300 & 301, Sec. 19AD,
T98; R11W; W.M.

Dear Mr. Johnson:

I am very concerned about the quality of work your Company performed on the Marvin Peters property in Lincoln County. On August 19, I received yet another report which indicated drop boxes were still put in backward; some of the boxes used were broken; and portions of one disposal trench had to be abandoned because of collapsed sidewalls.

Your Company was aware from the start that a careful and correct system installation was extremely critical on this site. To date, Lincoln County has made six re-inspections on this job, and the following construction violations, which are a reflection of substandard workmanship or negligence, have been documented:

1. The excavation of the disposal trenches did not follow the contour of the site as was staked out on the ground and specified in your plot plan. This resulted in trenches which fell in grade as much as 7 inches and minimum trench separation distances not being maintained.
2. Unapproved filter material having excess dirt and fines was originally installed.
3. Perforated pipe was installed into the drop boxes.
4. Undisturbed earthen berms were not maintained between the drop boxes and the start of the disposal trenches.

Mr. Marvin Peters
Page 3
June 26, 1981

You indicated you were receptive to this alternative and authorized Mr. Doak to resubmit a plot plan and permit application to Lincoln County in accordance with the system we had staked out. Additionally, two upgradient overlapping ground water intercepting drains will be installed to insure the disposal area is protected from the temporarily perched groundwaters which may otherwise occur at elevations above 18 inches during winter and spring.

Even though you are reducing your proposal to a two bedroom dwelling, I encourage you to retain the larger 20' x 20' sand filter design. While the redundant disposal system is an option for you, I don't believe it provides the same degree of safeguards associated with a standard repair area. For the small difference in cost, I feel the added treatment capacity of the larger unit is a sound investment.

From your observations of our staking the system out on contour, I'm sure you appreciate that there is no room for error. I advise you to select your installer carefully and use only a licensed installer who is thoroughly experienced with sand filter and redundant system installations.

In regard to your variance application, it would have been very difficult for you to have technically supported a proposal for a bottomless sand filter with no repair option. This is compounded by the fact that the unit was proposed immediately upslope from your house on a sand fill over basalt. I'm glad we were able to find a workable alternative for you.

As to my involvement on your lot, it was more in the nature of an informal review, rather than a variance. I have returned your variance file to the DEQ Subsurface Systems Section with a copy of this letter. Your question regarding a refund of the variance fee you have filed should be directed to:

Sherman Olson, Variance Coordinator
Department of Environmental Quality
P.O. Box 1760
Portland, OR 97207
(Telephone: 229-6443)

Please contact me at 378-8240, Salem, if I can be of further assistance.

Sincerely,

Gary Messer, R.S.
Variance Officer

GMM/wr

cc: Sherm Olson, Variance Coordinator ✓
cc: DEQ Tillamook Office
cc: Bill Zekan, Lincoln County Supervising Sanitarian, Newport



State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY
1234 S. W. Morrison Street, Portland, Oregon 97205

Item F

INTEROFFICE MEMO
229-6443

To: Acting Variance Officer

Date: September 18, 1975

From: Mark P. Ronayne, Subsurface & Alternative Sewage Systems Division

Subject: Recommendations from Ray Underwood regarding the "public information gathering hearing" process addressed under OAR 340-73-045

Ray Underwood provided a few comments relative to a public information type hearing provided for under OAR 340-73-045 you may find helpful.

HEARING NOTICE

The variance officer should notify all known parties interested in the consideration proposed of the hearing time, place, and date. (Public notice via news media etc., not required.) Parties who should be notified include:

- (a) The applicant;
- (b) contract county or DEQ branch office;
- (c) regional department personnel (as applicable); and
- (d) any other known party of interest.

SITE EVALUATION

The variance officer should examine the site in question in conjunction with the hearing, in advance or after the public information gathering session; either invite all parties of interest including persons representing the applicant to be present during your field review (Ray emphasized this!) or go by yourself.

TESTIMONY

All testimony should be entered into taped record. Magnetic tape cassettes will be available from headquarters. Hearing tapes will be preserved at headquarters.

Each system layout, schematic diagram, chart, drawing, field data sheet, etc., should be assigned an exhibit reference number or letter. When an exhibit is entered into hearing record, the variance officer should keep notes on a data summary sheet and record the exhibit's reference number or letter together with a brief description of its nature.

All prepared written statements should be read into the record. (e.g., the site denial letter, description of the proposal, pertinent correspondence provided by applicant or county etc..)

PREFACING REMARKS

At the onset of the hearing, the following opening comments should be placed into the record. (Ground rules)

- (a) Name - Agency (variance officer);
- (b) Applicant's name, property's legal and approximate size;
- (c) Those OAR's the applicant is requesting variance from;
- (d) A short description of the parcel in question;
- (e) Explain OAR 340-73-045 provides for a public information gathering hearing rather than a contested case type hearing and thus, cross-examination of persons providing testimony will not be permitted.

Note:

1. Indicate that, as a variance officer, you may request the testifier expand upon information submitted into the record or you may raise questions to clarify etc., as you deem appropriate.
2. Ask that each person wishing to testify preface his or her remarks by stating his or her name and indicating what interest he or she represents.
3. Have persons appearing at the hearing sign an attendance check list which provides name, address, and interest in the subject being considered.
4. When you arrive at the conclusion of the hearing, announce your decision will be forthcoming within 45 days. (i.e., after you have examined information forwarded into the record, evaluated the site in question, if you have not previously had the opportunity to do so, etc.)
5. Forward a copy of your decision to:
 - (a) The applicant;
 - (b) county agency administering the subsurface program;
 - (c) headquarters;
 - (d) other parties you deem appropriate.

Be sure your decision transmittal relating the variance decision reiterates pertinent testimony or findings and reflects those portions of testimony, research findings, etc., which add or detract from the proposal.

6. If a decision to grant or conditionally grant the proposed variance is rendered, write the county having subsurface jurisdiction over the parcel in question instructing them to grant the permit subject to any extraordinary stipulations you deem necessary to maximize the life of the proposed system and/or minimize contamination of state water resources. (Send a courtesy copy of the same to headquarters together with taped records.)

MPR:c1

posal system or alternative sewage disposal system shall be issued for use on the described parcel while the approved septic tank, effluent sewer and absorption facility are in use on the described parcel. (1973 c.835 §213; 1974 s.s. c.30 §2; 1975 c.167 §5; 1975 c.794 §1)

454.657 Variance; conditions; hearing. (1) After hearing the Environmental Quality Commission may grant to applicants for permits required under ORS 454.655 specific variances from the particular requirements of any rule or standard pertaining to subsurface sewage disposal systems for such period of time and upon such conditions as it may consider necessary to protect the public health and welfare and to protect the waters of the state, as defined in ORS 468.700. The commission shall grant such specific variance only where after hearing it finds that strict compliance with the rule or standard is inappropriate for cause or because special physical conditions render strict compliance unreasonable, burdensome or impractical.

(2) The commission shall adopt rules for granting variances from rules or standards pertaining to subsurface sewage disposal systems in cases of extreme and unusual hardship. The rules shall provide for consideration of the following factors in reviewing applications for variances due to hardship:

(a) Advanced age or bad health of applicants;

(b) Relative insignificance of the environmental impact of granting a variance; and

(c) The need of applicants to care for aged, incapacitated or disabled relatives.

(3) The department shall strive to aid and accommodate the needs of applicants for variances due to hardship.

(4) Variances granted due to hardship may contain conditions such as permits for the life of the applicant, limiting the number of permanent residents using a subsurface sewage disposal system and use of experimental systems for specified periods of time. (1975 c.309 §2; 1979 c.591 §4)

454.660 Delegation of variance powers; appeal; qualification of officers; hearing and decision. (1) The Environmental Quality Commission shall delegate on such general conditions as it may find appropriate the power to grant variances to special variance officers appointed by the Director of the Department of Environmental Quality. Decisions of the variance officers to grant varian-

es may be appealed to the Environmental Quality Commission.

(2) Variance officers appointed under this section shall be persons qualified in soil sciences and possessing knowledge of and experience in subsurface sewage disposal methods.

(3) Each request for a variance under ORS 454.657 shall be heard by the appropriate variance officer in the county within which the parcel of real property described in the variance request is located.

(4) Each request for a variance shall be heard by the appropriate variance officer within 30 days after the date on which a completed application for a variance has been received by the Department of Environmental Quality. A decision shall be made by the variance officer within 45 days after completion of the hearing on the variance request. (1975 c.309 §3)

454.662 Variance fee; low income elderly exemption; refund. (1) Except as provided in subsection (2) of this section, each application for a variance submitted pursuant to ORS 454.657 must be accompanied by a nonrefundable fee, the amount of which shall be determined by a fee structure adopted by rule of the Environmental Quality Commission but not to exceed \$225 per application. The moneys received are continuously appropriated to meet administrative expenses of the hearings.

(2) Notwithstanding subsection (1) of this section, an applicant for a variance under this section is not required to pay the nonrefundable fee specified in subsection (1) of this section if, at the time of filing the application, the applicant:

(a) Is 65 years of age or older;

(b) Is a resident of this state; and

(c) Has an annual household income, as defined in ORS 310.630, of \$15,000 or less.

(3) Notwithstanding subsection (1) of this section, the department or its contract agent may refund a fee collected under subsection (1) of this section if the applicant withdraws the application before the department or its contract agent has commenced field work or any other substantial work associated with the application. (1975 c.309 §4; 1979 c.591 §1)

454.665 Inspection of completed construction; certificate of satisfactory completion; appeal from denial of certificate.

(1) Upon completing the construction for

340-71-425 Variance Officers.

- (1) To qualify for appointment as a special variance officer after the effective date of these rules an individual must:
 - (a) Have three (3) years full time experience in subsurface sewage disposal methods since January 1, 1974; one (1) year of which shall have been in Oregon; and
 - (b) Have attended one (1) or more seminars, workshops, or short courses pertaining soils and their relationship to subsurface sewage disposal.
- (2) Agreement (contract) counties may request that a county staff member, meeting the above qualifications, be appointed special variance officer. That staff member, if appointed, would perform the Department's variance duties within that county.

340-71-430 Variance Hearings.

- (1) The variance officer shall hold a public information type hearing on each variance application.
- (2) The hearing shall be held in the county where the property described in the application is located.
- (3) Each variance shall be heard within thirty (30) days after receipt of a completed application.
- (4) A decision to grant or deny the variance shall be made in writing within thirty (30) days after completion of the hearing. If the variance is granted, the variance officer shall set forth in writing the specifications, conditions and location of the system.
- (5) The burden of presenting the supportive facts shall be the responsibility of the applicant.
- (6) The variance officer shall visit the site of the proposed system prior to conducting the hearing.
- (7) Except for hardship variances, granted variances shall run with the land.

RULES OF GENERAL APPLICABILITY AND ORGANIZATION

DIVISION 11

Rules of Practice and Procedure

[ED. NOTE: Administrative Orders DEQ 69 (Temp) and DEQ 72 repealed previous rules 340-11-005 through 340-11-170 (SA 10).]

Definitions

340-11-005 Unless otherwise required by context, as used in this Division:

(1) "Adoption" means the carrying of a motion by the Commission with regard to the subject matter or issues of an intended agency action.

(2) "Agency Notice" means publication in OAR and mailing to those on the list as required by ORS 183.335(6).

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

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

(5) "Director" means the Director of the Department or any of his authorized delegates.

(6) "Filing" means the completed mailing to or service upon the Director. Such filing is adequate where filing is required of any document with regard to any matter before the Commission, Department, or Director except a claim of personal liability.

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

(8) "Order" has the same meaning as given in ORS 183.310.

(9) "Party" has the same meaning as given in ORS 183.310 and includes the Department in all contested case hearings before the Commission or Department or any of their presiding officers.

(10) "Person" has the same meaning as given in ORS 183.310.

(11) "Presiding Officer" means the Commission, its Chairman, the Director, or any individual designated by the Commission or the Director to preside in any contested case, public, or other hearing. Any employee of the Department who actually presides in any such hearing is presumptively designated by the Commission or Director, such presumptive designation to be overcome only by a written statement to the contrary bearing the signature of the Commission Chairman or the Director.

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

Statutory Authority: ORS 468.020 and 183.341

Hist: Filed and Eff. 3-22-74 as DEQ 69 (Temp)

Filed 6-5-74 as DEQ 72, Eff. 6-25-74

Amended 9-6-74 by DEQ 78, Eff. 9-25-74

Amended by DEQ 122, Filed and Eff. 9-13-76

Public Informational Hearings

340-11-007 (1) Whenever there is required or permitted a hearing which is neither a contested case hearing nor a rule making hearing as defined in ORS Chapter 183, the Presiding Officer shall follow any

applicable procedural law, including case law and rules, and take appropriate procedural steps to accomplish the purpose of the hearing. Interested persons may, on their own motion or that of the Presiding Officer, submit written briefs or oral argument to assist the Presiding Officer in his resolution of the procedural matters set forth herein.

(2) Prior to the submission of testimony by members of the general public, the Presiding Officer shall present and offer for the record a summary of the questions the resolution of which, in the Director's preliminary opinion, will determine the matter at issue. He shall also present so many of the facts relevant to the resolution of these questions as he then possesses and which can practicably be presented in that forum.

(3) Following the public informational hearing, or within a reasonable time after receipt of the report of the Presiding Officer, the Director or Commission shall take action upon the matter. Prior to or at the time of such action, the Commission or Director shall address separately each substantial distinct issue raised in the hearings record. This shall be in writing if taken by the Director or shall be noted in the minutes if taken by the Commission in a public forum.

Statutory Authority: ORS 468.020 and 183.341

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

Amended by DEQ 122, Filed and Eff. 9-13-76

340-11-008 [Filed 9-6-74 as DEQ 78, Eff. 9-25-74

Repealed by DEQ 122, Filed and Eff. 9-13-76]

RULEMAKING

Notice of Rulemaking

340-11-010 (1) Notice of intention to adopt, amend, or repeal any rule(s) shall be in compliance with applicable state and federal laws and rules, including ORS Chapter 183 and subsections (2) and (3) of this section.

(2) In addition to the news media on the list established pursuant to ORS 183.335(6), a copy of the notice shall be furnished to such news media as the Director may deem appropriate.

(3) In addition to meeting the requirements of ORS 183.335(1), the notice shall contain the following:

(a) Where practicable and appropriate, a copy of the rule proposed to be adopted.

(b) Where the proposed rule is not set forth verbatim in the notice, a statement of the time, place, and manner in which a copy of the proposed rule may be obtained and a description of the subject and issues involved in sufficient detail to inform a person that his interest may be affected.

(c) Whether the presiding officer will be a hearing officer or a member of the Commission.

(d) The manner in which persons not planning to attend the hearing may offer for the record written testimony on the proposed rule.

Statutory Authority: ORS 468.020 and 183.341

Hist: Filed and Eff. 3-22-74 as DEQ 69 (Temp)

Filed 6-5-74 as DEQ 72, Eff. 6-25-74

Amended by DEQ 122, Filed and Eff. 9-13-76



MULTNOMAH COUNTY OREGON

Item K

OFFICE OF THE COUNTY EXECUTIVE
ROOM 136, COUNTY COURTHOUSE
PORTLAND, OREGON 97204
(503) 248-3308

DONALD E. CLARK
COUNTY EXECUTIVE

January 15, 1982

Joe B. Richards, Chairman
Environmental Quality Commission
c/o Department of Environmental Quality
522 SW Fifth Avenue
PO Box 1760
Portland, OR 97207

Dear Mr. Richard:

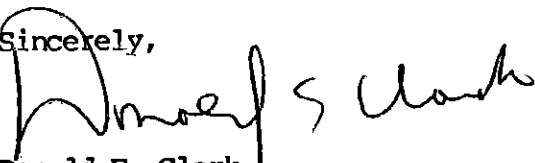
I am immensely disappointed in the recommendation of the staff of the Department of Environmental Quality that the limit for exposure of the public to ozone be raised by fifty percent, despite strong testimony from public health officials that such an action would fail to protect Multnomah County residents from potentially excessive levels of ozone. If the Environmental Quality Commission were to accept that recommendation, the health of thousands of Oregonians would be unnecessarily threatened.

This change would represent a retreat from a long-term commitment in this state to protect the quality of life of our citizens. And it will cost citizens in the long run. There is no free lunch; someone pays.

Not to continue the existing limitations on the level of ozone shifts the cost of air quality control from industry to citizens and to the health care industry in higher costs for treatment of the effects of air pollution. It is the responsibility of elected and appointed officials to maintain a "pay as you go" policy and not to pass costs on to future generations. I know of no mandate from the people of this state to move away from Oregon's consistent support of legislation and regulations which maintain the high quality of life and the environment that has been the hallmark of this state.

I urge you not to adopt the staff recommendation on the level of ozone, but to retain existing regulations which are crucial to our health and welfare.

Sincerely,


Donald E. Clark
County Executive

lpb

Item K

~~494 State St., Suite 250~~
Salem, Oregon 97301
317 Court St. NE, #202



*The League of Women Voters
of Oregon*

581-5722

January 13, 1982

Joe B. Richards
P.O. Box 10747
Eugene, Oregon 97401

Dear Mr. Richards:

I have enclosed this written testimony by the League of Women Voters of Oregon on the proposed changes in the State Photochemical Oxidant Standard.

This testimony was mailed to the address given on the hearing notice but did not get included in the record of the hearing.

We want the League of Women Voters of Oregon to go on record as opposing these changes.

Sincerely yours,

Mary Ann Rombach, Natural Resources Ch.

RECEIVED JAN 14 1982

317 Court St. NE, #202



*The League of Women Voters
of Oregon*

581-8722

November 18, 1981

TESTIMONY ON PROPOSED CHANGES IN THE STATE PHOTOCHEMICAL OXIDANT STANDARD:

The League of Women Voters of Oregon opposes any weakening of the present state photochemical oxidant standard. If the state standard is weakened, it should be no higher than 0.1 ppm. If it is raised to 0.12, the secondary standard should remain 0.08 ppm.

There are times when the state needs to set higher standards for pollution than those set by the federal government. We are concerned by the EPA decision to raise the ozone standard to 0.12 ppm.

When EPA was preparing the ozone criteria document, it retained a panel of experts to advise it on the ozone concentrations at which adverse health effects might be experienced. The panel recommended in January 1978 that the primary standards remain at 0.08 ppm. In June 1978, EPA proposed that the primary standard be 0.10 ppm and the secondary standard be 0.08 ppm. It was after hearings and pressure from the White House that the EPA Administrator decided, for economic reasons, to change the standard to 0.12 ppm.

We would not like to have the state weaken the ozone health standard because of economic reasons. The intent of Congress in writing the Clean Air Act was that economic and technological feasibility were not to be considered in setting air quality standards. These economic considerations are to come in the implementation process. Health standards should be considered the most important in determining air quality.

The change in the federal ozone standard from 0.08 ppm to 0.12 ppm is actually greater than it appears. The EPA in reviewing health studies in 1979, failed to correct for a change in instrument calibration methods. Health effect studies used the old calibration method, so relative to the new method, the ozone levels reported for threshold health effects are actually 15-25% lower. Thus the health standard set at 0.12 ppm is in effect 0.14 - 0.15 ppm.

Health standards need to have a margin of safety to give protection against unknown errors in research and undiscovered health effects. Going to a 0.12 ppm standard would leave an inadequate margin of safety. When the EPA originally provided a margin of 20% for the old standard, it was criticized by the National Academy of Sciences as being too small. They said a 20% margin could easily be swallowed up by experiment error alone. A 20% margin is smaller than that maintained for human exposure to other toxic substances such as pesticides and radiation. Now, because of the known instrument calibration error, one-half of this already inadequate margin of safety has been consumed.

Our final reason for opposing a weakening of the standard is that historically we have not met standards by the established deadlines. A strong state standard would assure that real efforts are made to lower ozone levels.

Mary Ann Rombach, Natural Resources Chair.
Rt. 3, Box 3216
Rainier, Oregon 97048 (556-3801)

Norma Jean Germond, President
224 Iron Mountain Blvd.
Lake Oswego, Oregon 97034 (636-4251)

ANNA M. ROSE
Executive Director
Portland, Oregon 97201

Item K EQC
W. Young
Gillaspie

Jan. 24, 1982

Environmental Quality Commission
522 S.W. 5th
Portland, Or

Dear members of the Commission

I believe it is a danger to the health of the public - clear present danger - to reduce requirements or collection limits.

It seems to me that in the face of continuing pollution we need to be more careful - not less -

Sincerely yours

Anna M. Rose

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
JAN 25 1982
OFFICE OF THE DIRECTOR

January 19, 1982

SAVE

To: Environmental Quality Commissioner

From: Ad Hoc committee on Ozone
Oregon Lung Association

Attached is our response to the D.E.Q.
staff report on Ozone. This response
is short and to the point. We believe
the information contained herein will
be provocative.

*Degree of
probability
Secondary .08*

1979 EQC - .08 AFTER EPA ^{.12} ~~.08~~ in 1979

*TEST TO BE VALID
STATISTICALLY SOUND
ABLE TO REPORT*

NOT UNCONSIDERING ECONOMIC FACTORS

*Case - NO comfort, just stated EPA NOT arbitrary -
NOT that it was correct*

Is there ~~strong~~ ^{persuasive} evidence to justify .08 ppm? NO

ALERT AT .12 NOT .20 - But decide this spring

Dr SHADE - Am. Jour Epidemiology 1979 Article Pulmonary Function

(p. 3)

- 1. High levels of smog but what level? what other chemicals*
- 2. + study of symptoms at .08 but what else in the air*
- 3. ozone causes damage - but at what levels.*

*EPA Summary Statements Jan 1978 possible effect at .10 ppm
(Alert 5th)*

THE DIRECTOR'S REPORT ON OZONE: HOPELESSLY BIASED

In early January, 1982, Department of Environmental Quality (DEQ) Director William H. Young produced a report on the Department's proposed fifty percent increase in ozone exposure limits to Oregon residents. This report, Adoption of Amendments to the State Photochemical Oxidant Ambient Air Quality Standard (OAR 340-31-030) as a Revision to the State Implementation Plan, has serious flaws which preclude the adoption of its recommended action by the Environmental Quality Commission. The major problems with the Director's report are that it is biased and that it is technically incorrect.

1. Examples of bias.

The Department staff employs several rhetoric devices which reveal conscious or unconscious bias. The most flagrant is the technique of answering the wrong question, i.e. answering to what the respondent would like to have heard. For example, a close reading of Multnomah County Executive Don Clark's testimony will show that he did not assert that ozone causes emphysema in humans, but only in animals. (There are, of course, several suggestive epidemiologic studies which show relationships between human lung disease and ozone, but the causal link is not firmly established. For some, the causal link between tobacco and lung disease isn't firmly established, either).

WHAT
relationships
What
level

A second, related form of bias is that of ignoring arguments which don't support the Department's own position. Examples of this abound.

- Nowhere in its summary does the Department address such important evidence as The National Academy of Sciences review of ozone effects cited by Dr. Lawyer, which is replete with studies showing adverse health effects at levels down to .03 parts per million. It's interesting to note that the same Dr. Hackney on whom the Department wrongly relies to rebut objections to its action wrote the very chapter Dr. Lawyer referenced.

where it.

- Dr. Hackney's remarks select only "negative" studies. Not all health effects studies of ozone at lower levels of exposure are negative--as Dr. Hackney well knows.

- Dr. Mullenix, in rebutting Mr. Clark's testimony, ignored the issue of increased susceptibility to bacterial infection in ozone-exposed animals. Portland has a rate of pneumonia deaths one and one-half times the state average.

- Dr. Mullenix ignores animal studies which show tumor induction by ozone.

- The Department downplays the 1978 EPA Summary Statement referenced by Mr. Weller, even though that medical panel could find "...no compelling evidence to suggest a change from the concentrations defined by the existing primary air quality standard, namely 0.08 ppm".

- The Department ignores the type II error issue presented by Dr. Schade, despite the acknowledgement that studies which purport to show no effect of ozone exposure of ambient levels invariably have small numbers of subjects, making false negative results a distinct possibility.

Another form of bias in the Department's analysis is the raising of "third factor" arguments without substantiation. Studies which show association between ozone exposure and adverse health effects are dismissed with language such as "...may have occurred as a result of another pollutant", even though the effects measured are precisely those which ozone would be expected to produce. Cigarette smokers get lung cancer, some say, because of some predisposition to it. This is the same kind of argument.

Finally, there's the matter of whom the Department chooses to believe. Six physicians from Oregon, expert in chest disease and public health, opposed the Department's action in testimony and presented a well-documented argument with numerous references to the scientific literature. Not one is mentioned in the Department's comments on the testimony. Two outside experts, presumably at the behest of industry, presented written testimony supporting the Department's position. They did not appear at the hearing and their conclusions could not be challenged in public. Their remarks form the basis for the Department's comments, from which flow its recommendations. In this regard, it appears that the Department is either abandoning its previous position, that it lacks necessary expertise to evaluate health effect studies, or

is assigning the task of evaluation to two outside persons, whose qualifications and objectivity have not been subjected to public scrutiny.

2. The toxicity of ozone.

The following points reasonably summarize the toxicity of ozone:

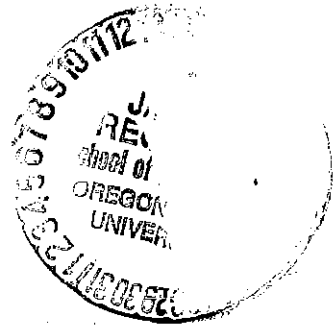
- It is an irritating gas with its main human effect on eyes, noses and lungs.
- It is associated with tumor induction, emphysematous changes, and reduced resistance to bacterial infection in animals.
- A threshold level for adverse acute health effects of ozone in humans has not been firmly established, but some studies show effects at, and below, the current limit of .08 parts per million.
- Possible effects of chronic ozone exposure include lung cancer, emphysema, and chronic bronchitis in humans. Epidemiologic studies have neither proved, nor disproved that such effects may occur. Los Angeles data, however, do show an association of lung function abnormalities with levels of .09 parts per million (average annual mean of daily maximum concentration).

3. Conclusion.

The Department's proposed increase in limits of ozone exposure may not allow any margin of safety to persons in areas of Oregon subject to high ozone levels. A lower level standard should be maintained, and further study should be made of the adverse health effects of this dangerous substance.

RECEIVED JAN 20 1982

Mr. Joseph B. Richards, Chairman
Environmental Quality Commission
P. O. Box 1760
Portland, Oregon 97207



Dear Mr. Richards:

In August 1980, I presented a statement at a hearing conducted by the Department of Environmental Quality regarding a proposed change of the Oregon ambient air ozone standard from 0.08 ppm to 0.12 ppm. The statement was made on behalf of the Portland Chamber of Commerce.

I write today as a citizen concerned not only with human health, but also with the welfare of the State and all its citizens. A letter is being submitted in lieu of a personal appearance at the Environmental Quality Commission meeting on January 22, because I will be away from Oregon on that date.

As a former member of the Environmental Quality Commission, I understand the need for uniformity in ozone standards. By retaining a standard which is not uniform with that of the Federal agency, industrial development in Oregon will be hindered and further delay in the State's economic recovery will result.

If people with money to invest in industrial development in Oregon see that they must install the best available emission control equipment today, and then in less than ten years must update that system not knowing whether the established standards can be met, they will look elsewhere for a location.

The current standard presents a very difficult problem for the Department of Environmental Quality also. This agency is bound by its own State Implementation Plan to enforce a standard which can well be unachievable.

I therefore urge the Environmental Quality Commission to change the Oregon ambient air standard for ozone to bring it into agreement with the Federal standard.

Sincerely,

Storrs Waterman
Storrs Waterman
P. O. Box 20481
Portland, Oregon 97220

January 12, 1982

cc: Commissioners Bishop, Brill, Burgess, Sommers.
William H. Young, E. J. Weathersbee

January 21, 1982

William Young
Director of DEQ
522 S.W. 5th
Portland, Oregon

Dear Mr. Young:

I'd like to register a vigorous protest against any lessening of clean air standards. My wife and I moved to north Portland four years ago. That's where we found the most affordable, yet decent housing and stable neighborhoods. I like my neighborhood, but I'm sick of the contaminated air. I'd move to the suburbs if I could afford it, just to breathe sweeter, cleaner air. Depending upon the direction of the winds, the air here is assaulted by noxious vapors from Crown Zellerbach and the Armour slaughter house; diesel smoke from the Swan Island ship and train yards; and, at night in the summer, I have awakened on occasion to find my eyes watering and my throat burning from some awful odor drifting into my house on the night air from Lord knows where.

I'm aware of the possible roll backs of auto emission standards and the increasing unregulated use of wood and coal stoves. It all adds up to a bleak picture of the future of air quality. Sometimes when I drive home at night from work, the wood smoke is so thick that my headlights are perfectly captured in the air.

Certainly repercussions to health are important to consider, but are not the only significant reasons to fight to preserve the air quality. Pride in one's community, comfort, "livability", and pleasure in one's surroundings are hard to measure, but are extremely important to me and my wife. My thoughts are offered to you for consideration because I know there are upcoming decisions to be made that will influence air quality, and the quality of life in Portland.

Sincerely,

Ron Swan
2021 N. Dekum
Portland, OR. 97217

cc Oregon Environmental Council
Sierra Club

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

R E C E I V E D

JAN 21 1982

OFFICE OF THE DIRECTOR

Item K

why EQC
Young
Weatherbee



CITY OF

PORTLAND, OREGON

COMMISSIONER OF PUBLIC UTILITIES

Margaret D. Strachan, Commissioner
1220 S.W. 5th
Portland, Oregon 97204
(503) 248-4151

January 20, 1982

Mr. Joe B. Richards, Chairman
Environmental Quality Commission
Department of Environmental Quality
P.O. Box 1760
Portland, Oregon 97207

Dear Mr. Richards:

As a public official, I feel it is important to speak out on health issues which could have an affect on Portland residents. I am therefore writing to express my opposition to changing Oregon's ozone standard from the .08 ppm level to .12 ppm.

While I understand that the data available does not indicate that such a change would necessarily present a health hazard, I do not feel that there is sufficient data to rule out the possibility of harmful effects. Until we have a better understanding of the effects of ozone, I cannot support risking a change in the standards.

Sincerely,

Margaret D. Strachan
COMMISSIONER OF PUBLIC UTILITIES

MDS:dha

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JAN 22 1982

OFFICE OF THE DIRECTOR

my EQC
Young
Weather

31 January 1982

2419 Hillcrest Road
Medford, Oregon 97501
State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
FEB 3 1982

Environmental Quality Commission
c/o Mr. Joe Richards, Chairman
P.O. Box 1760
Portland, Oregon 97207

OFFICE OF THE DIRECTOR

Dear Chairman Richards and Commission members,

With all due respect to each of you for the sometimes thankless job of sitting on a State policy making board as unpaid volunteers, it was with deep disappointment and disbelief that I read on a Sunday morning in the Medford Mail Tribune of your Commission's ruling which relaxed the present Oregon ozone standard from .08 ppm to .12ppm.

I am certain that much discussion and information was digested by each of you before taking such drastic measures. We, in Jackson County are probably more affected by your decision than any other area in Oregon and, therefore, you can understand our most negative reaction to your vote. As one of the two areas in the nation for the greatest potential for air pollution, every ruling overturned or weakened by your Commission greatly affects every resident of Jackson County. At a recent symposium in Medford which focused on the Clean Air Act industry and local business and public officials and health care professionals all joined in workshops to address the serious problem continuing to face Jackson County. It was a most positive exchanging of views and concerns with local industry officials (John Smith of SOTIA) stating how they were for a strong Clean Air Act. 3 M Corporation also has made strides and a great dollar committment to a process which will decrease their large hydrocarbon emissions, and now you have changed the rules.

Federally, when the ozone standards were relaxed, many knew that it was because of strong lobbying by the American Petroleum Industry and the automobile lobby, but many of us in Oregon knew that Oregon would not follow suit. The public hearing process on this proposed change was heavily in favor of retaining the .08 ppm. standard. Oregon, we thought, was committed to a government of the people and to the environment, and public hearing process and you have, singlehandedly, betrayed that trust. Why? "To prevent giving an anti-business signal to industries that might be planning to build in Oregon"? Shame on you Mr. Somers. Since when has economics been the criteria for establishing health standards? Mr. Glen Jackson, long Mr. Oregon, before his death last year, stated months before he died, "Liveability is Jackson County's strongest asset." And you EQC Commissioners have taken a first step to take Oregon out of the lead in concern for its citizens and for responsive government and caved into vested economic interests. I weep!

Sincerely,
Patricia P. Kuhn
Patricia P. Kuhn

- cc: Kip Lombard, Rep.
- Eldon Johnson
- Rebecca DeBoer
- Len Hannon
- Mark Hatfield, Senator
- Robert Packwood, Senator

P.S. Thank you, Mary Bishop, for your lonely vote of dissent.

Jan. 16, 1982

Item 9

William H. Young, Director
Department of Environmental Quality
522 S.W. 5th Avenue
Portland, Oregon 97204

Dear Mr. Young:

It is very hard for me and many others to understand how your staff could arrive at their recommendation of ignoring a severe problem that has not been resolved in 3 years and will not go away by passing the buck on to some other agency.

On page 2 of the staff report, they say this should be given to local and other state agencies. For 3 years, we have seen this problem handed from one agency to the next and it is about time for this buck to stop. Not only does the staff fail in telling us who these other agencies are, but they have failed to take the Attorney General's Opinion No. 8069 seriously.

In my conversations with your staff, it is very clear to me that they have not studied the Attorney General's Opinion in depth and in my opinion, they are reading into it what they want to hear. To make certain we all understand what this opinion says, I would like to take a few minutes of your time and go through it.

Please note that page 3, indicates what a disposal site is, and on page 4, it defines the term "Solid Waste". In defining solid waste, we should not overlook the fact that garbage, rubbish, discarded home and industrial appliances, and dead animals are listed as solid waste. It also lists discarded or abandoned vehicles or parts thereof. Please note that parts thereof was underlined. Since the opinion goes on to prove tires fall into this same class, it would be very hard indeed for anyone to classify used tires as any thing but solid waste.

Pages 4, 5, 6, and 7, proves this by sighting court cases. Page 8 goes on to say with regard to pages 4, 5, 6, & 7, "Applying these tests to the tire question, we find on the facts presented to us that the tires are "Waste." They probably do not have value as recappable tires and are therefore "useless" for their original intended purpose, that is, as a vehicle tire, and in any event they have been "discarded" for that or any similar use. Use as a livestock control fence is certainly substantially different from the original use.

Page 8 goes on to say that "In our opinion, a tire is a vehicle part, essential to its operation to the same extent as an engine, transmission or axle, and thus specifically within the definition when discarded or abandoned. It goes on to quote another court case, Premier Products Co. v. Cameron, that discarded tires fall into the same class as any other discarded vehicle part.

In summarizing page 9, the opinion states "Within the context of the statute, the term "productive" does not seem to include the use of tires for a fence to confine livestock. Tires therefore probably ought not to be exempt from solid waste classification when used for this purpose.

Mr. William H. Young, Director

The D.E.Q. has very strict guidelines in determining the words "productive use". Page 10 indicates that the D.E.Q. must follow legislature intent and not its own views.

Page 11 says, "Should the commission conclude that the used tires are within the definition of "solid waste," it follows that the land and facilities used for their disposal, handling or transfer, or for recover of resources from them, would be a "disposal site" unless the site falls within the exceptions listed in ORS 459.005 (4). The exceptions, however, are not applicable under the facts involved in this question. Page 11 goes on to say that "A disposal charge, at most, is a further indication that the materials are useless or discarded and are solid waste.

Page 12 again sights a court case in saying, "Of course, once the tires are factually determined to have been rejected for any future use as tires, they are "discarded" and outside any such delegation of discretionary rulemaking power. I read this to mean the D.E.Q. cannot determine these tires to be anything but discarded, since it states this is outside your rulemaking power.

It is very clear that used tires have met all the test given when one is classifying the words "Solid Waste". Since tires are solid waste, we should go back to page 3 and 4. Page 3 says that the definition of a disposal site includes land and facilities used for the disposal, handling or transfer of solid waste or for resource recovery from solid waste. Resource recovery is the process of obtaining useful material or energy from solid waste. ORS 459.005 (9). At a solid waste meeting in Yamhill County, Mr. Remior said he was making a useful product from these tires.

Page 4, says under ORS 459.005 (11) that "Solid Waste" means all putrescible and non putrescible waste, including but not limited to discarded or abandoned vehicle or parts thereof." Below this definition, it says "Solid Waste" is a subcategory of "waste." "Waste," as defined at ORS 459.005 (14), consists of "useless or discarded material." (Emphasis added.) All materials categorized as "solid waste," as defined in ORS 459.005 (11), must necessarily be "useless or discarded." 39 Op Atty. Gen. 772 (1979).

On page 661 of the Oregon Solid Waste Control, ORS 459.055 speaks on "Landfills in farm use areas". Since the Attorney General's Opinion leaves no doubt as to if tires fall into the class of "Solid Waste", and that solid waste should go into a "Disposal Site", we should look at the law regarding landfills in farm use areas. 459.005 list several things that would have to be met in allowing tires into a farm area. (a) Assure rehabilitation of the site to a condition comparable to its original use at the termination of the use for solid waste disposal. (c) Minimize the impact of the facility on adjacent property. (e) Minimize rodent and vector production and sustenance. None of these items can be met on this farm with used tires.

I think the D.E.Q. is misinformed regarding this tire fence. I was told the staff thinks this fence is almost complete and this is not the case. Several people that have taken pictures from the air and ground can prove that less than 10% of the tires on this farm are in a fence.

Mr. William H. Young, Director

Photographs taken over the last three years also indicate that very large piles of tires have not been moved in over 2 years. On page 3 of your staff report, it says that any material storage of over 6 months will constitute "disposal" and your office will regulate it. Since less than 10% of the tires on this farm are in any type of row that would indicate a fence and almost no action has been taken place with fence building in this last year, your 6 month deadline of material storage has long since past. Again on page 4, item 4, your staff speaks out on this six month material storage.

To those that would question my statement of less than 10% of the tires being used for a fence, lets look at this for a moment.

A pickup tire is approximately 3 feet in diameter and truck tires 4 feet and larger, I have used 42 inches (3.5 feet) as a measuring tool. Keep in mind that most of these tires are of the truck tire type, but even if they were car tires, I think you will see the point I am trying to make.

On January 16th, 1982, I drove by the so called fence to make some measurements. A very small distance of the fence has up to 5 and 6 tires on top of each other. Most of the fence is two and three tires high. Lets say the tire fence is complete with the (175,000 tires mentioned in the Yamhill County Solid Waste Meeting) tires stacked 5 high.

$3\frac{1}{2}$ feet for each tire would equal 1,508 tires to the mile. Stacking these tires five high would result in 7,540 tires per mile. If you would divide 7,540 tires into 175,000 tires, you would have a fence $23\frac{1}{3}$ miles long. Since one full section of land at 644 acres is only 4 miles around, this would require 8 sections of land or 5,152 acres to use up all the tires if the fence was 5 tires high. We could build a fence 10 feet high and reduce this requirement to $11\frac{1}{2}$ miles or 4 sections of land at 2,576 acres, but a fence 10 feet high would very hard to build. Even if I have missed my tire size by 50%, and I have not, you can see Mr. Remior does not have enough property to use up the tires on his property. Even using import tires that were two feet in diameter, it would take 13,200 tires to build a fence one mile long stacked five high. This would require over 13 miles of fence to use up 175,000 tires. I can assure you, these are not 2 foot diameter tires on this farm.

The last thing I would like to mention is with regard to the rodent and vector problem. Your staff said they did not see anything in this area. I am not an entomologist, but even I know your not going to find a mosquito breeding ground in December. Ask the people that live there. They have to put up with the problem in those months when mosquito problems are present. As to the rodent problem, again your staff has missed the boat. Rats are nocturnal rodents and make themselves known at night. To look for rats in the day time would be a good trick if one could do it, but you can't. How many of your staff has been up in that area at night looking for rats? Unless they have been there at night, I am not sure how they can say a rat problem does not exist at the present time.

Mr. William H. Young, Director

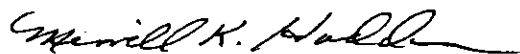
In making one last statement regarding the mesquito problem, your staff has indicated that many other natural sources of mosquito breeding grounds do now exist. That is a true statement, but once again they have overlooked one small item.

Natural mosquito breeding grounds are patrolled by birds and other predators as mother nature intended. Water in tires cannot be patrolled. As to the amount of water we are talking about, I poured out over three quarts of water from a tire that was laying on the ground in a somewhat covered area. This was in Salem, Oregon. To make sure we do not over state the case, lets use two quarts of water in each tire. This would be 87,500 gallons of mosquito breeding ground that cannot be patrolled by birds and other predators of the mosquito. If this water was poured out on the ground and was in a pond one inch deep, this would be a pond 14,036 square feet in diameter. This is over 1/4th of an acre.

I called your office and told you that Doctor David L. Perry Jr. MD said that he would provide all of the information you need to prove a mosquito problem does exist. Since your staff said that a problem does not exist, I can assume they have not contacted Doctor Perry and I would like to know why they (your staff) feel they are better qualified to make a statement than a medical doctor that has had to deal with mosquito problems.

I think the time has now come to take the bull by the horns and quit passing the buck. This tire problem will not go away until someone does what they should have done three years ago. This tire fence is not meeting any of the requirements needed in our farm land. To allow the tires to stay, will only encourage other people in our state to follow with their own quick way to make a dollar. The Attorney General's Opinion has classified used tires as solid waste and also indicates they should be in a disposal site along with all other solid waste material.

With all of the facts presented, it would be criminal indeed for anyone to back away from their job when they know in their own heart what they must do.



Merrill K. Haddon
3021 Industrial Way N.E.
Salem, Oregon 97303

Telephone (503) 363-4378

FRANK Geelan

owns 40 acres

— Above.

ANSWERS TO RUBBER TIRE QUIZ

THE FENCE WILL BE AS SHOWN ON THE MAP. PENCIL SHOWS PRESENT REMIOK BOUNDARY

RED LINE SHOWS PRESENT FENCE OF TIRES

FENCE HEIGHT IS 4 WILL BE BETWEEN 5.5 AND 6' IN HEIGHT. THE FENCE WILL NOT EXCEED TWO PASSENGER TIRES IN WIDTH. IN SOME CASES, ALONG ROAD FRONTAGE WIDTH WILL BE A SINGLE TRUCK TIRE

TIRES NEED ARE PASSENGER AND TRUCK TIRES. THE EXACT NUMBER IS NOT KNOWN BUT THE DENSITY WILL NOT EXCEED THE PRESENT DENSITY USED. 30 tires every 18' - TRUCK TIRES, 90 tires every 18' FOR PASSENGER TIRES. These figures will vary somewhat when combinations are used

1' dia for passenger tires 3' dia for truck tires - NOT SO
AGAIN NOT SO EVEN IMPACT TIRE ARE LARGER
TRUCK TIRES ARE 48" (4') DIA + LARGER.

THE BLUE LINE INDICATES WHERE BLUE REMAINDER OF THE TIRES WILL BE LOCATED

TIME FRAME WILL 400-500 TIRES DELIVERED TO SITE - WILL BE INSTALLED WITHIN 6-8 WEEKS. STOCK PILE WILL KEPT FREE OF WEEDS AND INSECTS AND AWAY FROM GARBAGE OR REFUSE STOCK PILES WILL BE WITH 100 YARDS OF FINAL LOCATION IN FENCE.

AREA NEED TO FINISH IS SHOWN ON MAP.

TYPE OF TREES - FIR 1' high when PLANTED. WILL GROW TO NORMAL HEIGHT. TREES RIPPEN BY NEIGHBORS WILL BE REPLACED. TREES WILL BE 4' APART. NO TREES ON NON-ROAD FENCES.

Handwritten notes on the left margin:
72
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600
250
3
125
25
2
3.5
17
18 TIRES
3
5
17
4
8
2

SEE PICTURE OF HOW FENCE IS PUT TOGETHER
DIRT AND GRASS ^(HOG DROPPINGS) FERTILIZER WILL BE PLACED
ON ROAD FRONT TIRES ONLY

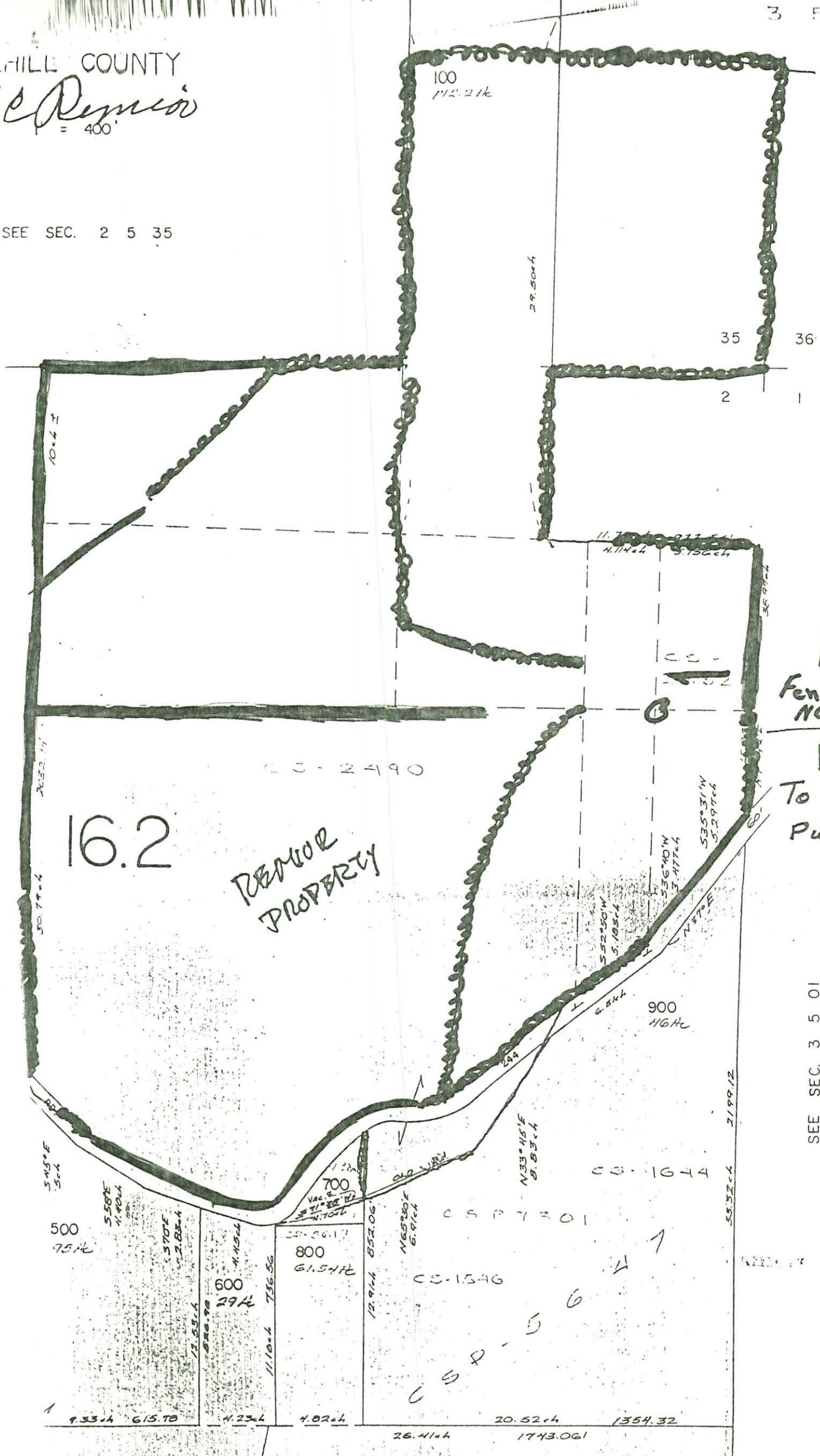
NO DIRT OR FERTILIZER IN BACKSIDE OR
CROSS FENCES

X J C Remmon



HILL COUNTY
Remission
= 400'

SEE SEC. 2 5 35



RED
Fence
NOW IN
BLUE
To be
PUT IN.

16.2

REMOVE
PROPERTY

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112.21k

29.50k

35

36

2

1

B

CO - 2490

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2032.74

5.45°E
5.4

500
75k

5.58°E
11.40k

5.70°E
2.85k

600
29k

4.15k

11.55k

11.10k

11.10k

736.56

800
61.54k

12.91k

852.06

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1743.061

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20.52k

1354.32

26.41k

1743.061

CO - 1614

CO - 1546

CO - 7301

CO - 1546

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CO - 1546

3199.12

55.32k

900
166k

N33°45'E
8.53k

6.6k

5.52°30'W
5.185k

5.36°40'W
3.417k

5.35°31'W
5.297k

11.71k
4.114k
5.156k

35.97k

SEE SEC. 3 5 01

MINUTES

YAMHILL COUNTY SOLID WASTE ADVISORY COMMITTEE

December 16, 1981

4:00 p.m., Room 105

ATTENDANCE:

Members

Present:

Elaine Craig, Chairman
Charles Barks
Darol Funk
Bette J. Grimm
Clancy Hinricks
Ezra Koch
Leonard A. Rydell
Mary Ellen Schwarzmann

Absent:

Bill Rau

Others

Present:

Robin Hamblet, Commissioner (present last half)
Bob Emrich, Riverbend Landfill
Jo McIntyre, Oregonian
Glenna Stone, Statesman
Mike Lee, News Register
Bob Shields, Assistant Legal Counsel
Dyke Mace, Sanitarian
Bill Campbell, Senior Planner
Sally Cline, Rt. 1, Box 44, Yamhill
Wm. C. Remior, Yamhill
L. C. & Dorothy Proebstel, Rt. 1, Box 59, Yamhill
Sherrill Adcock, Rt. 2, Box 99, Yamhill
Evamae Geelan, Rt. 2, Box 99, Yamhill
Nellie Raineri, Rt. 1, Box 84, Yamhill
Jacque' Wagner, Rt. 1, Box 63, Yamhill
Tom & Janis Gaddis, Rt. 1, Box 72, Yamhill

The Chairman, Elaine Craig, called the meeting to order. The minutes for the November 25th, 1981 special meeting were approved as presented.

Bob Shields, Assistant County Counsel, presented a written opinion of the Attorney General's opinion as to the impact of the application on the tire ordinance and his definition of solid waste. Leonard Rydell reminded the committee that remarks be limited to findings of fact on which they must base their decision as follows:

- (1) Utility of the proposed use.
- (2) Effect of the proposed use on the esthetics of the surrounding neighborhood.
- (3) Potential of the proposed use to create vector or pest breeding and/or habitat areas.

Committee member, Ezra Koch, stated that he did not feel that the fence itself was repulsive, but did not feel that that type of fence was necessary. He was concerned that the tire fence would collect water and in turn would breed mosquitoes. He also stated that he could not understand why the surrounding neighborhood had not chosen legal avenues to force Mr. Remior to clean up his premises.

Dorothy Proebstel, Rt. 1, Box 59, Yamhill, stated that she felt that Mr. Remior was not bothering anyone and that he should be allowed to finish his tire fence. Her husband, L. C. Proebstel, indicated that mosquitoes have been a problem in that area for over 40 years and that he did not feel the tires could fill with water since Mr. Remior intends to fill them with dirt.

Sally Cline, Rt. 1, Box 44, Yamhill, stated that she felt that tire fences were safer for animals than wire fences.

In answer to questions by Tom Gaddis, Rt. 1, Box 72, Yamhill, Mr. Remior indicated that he has not continued building his fence because he is waiting on a decision by the County to approve this action; that he uses tires to hold down tar paper that he has on some of his buildings; that the fire that was reported on his property was stumps, not tires burning; and that his property was outside the wild-life game area and he does not have to be concerned about impeding wild-life movement with his tire fence.

Jacque' Wagner, Rt. 1, Box 63, Yamhill, stated that she felt that there are an excessive amount of mosquitoes in the area and that the tire fence is not condusive to the aesthetic of the surrounding countryside. Ms. Wagner denied accusations made by Mr. Remior that her son pulled up some of Mr. Remior's trees.

Sherrill Adcock, Rt. 2, Box 99, Yamhill, expressed her opposition to tire fences and state that she felt that if the committee approved Mr. Remior's tire fence that it might set a precedent.

Nellie Raineri, Rt. 1, Box 84, Yamhill, indicated her concern over the excessive amount of rats in their area and felt that the tire fence contributed to this problem.

Bob Emrich indicated that he believed that the committee was left with a decision of wheth the individual or the community's rights were most important in this case, since the Count Counsel apparently disagreed with the Attorney General's opinion.

Ezra Koch stated that he believed that if the property was cleaned up that possibly the tire fence would not be that offensive.

The committee further discussed the tire fence application and decided that they could make a decision. Darol Funk moved to deny the application, based on the following findings:

- (1) That the applicant was not able to clearly indicate the number of tires needed to finish the tire fence.
- (2) That the applicant was filling the tires with fertilizer rather than clean fill dirt as requested by the sanitarian.
- (3) That the tire fence constituted a fire hazard.
- (4) That the tire fence increased the rodent and rat problem in the area, and
- (5) That it would be virtually impossible to regulate the installation of the balance of the tire fence.

Motion seconded and carried.

PUBLIC HEARING - Proposed Rate Increase Whiteson/Riverbend Landfill.

Bob Emrich, General Manager of the Riverbend Landfill, reviewed the written material presented to the committee pertaining to the Riverbend Landfill site, which will be opening late spring or early summer of next year. The various expense factors were discussed, as well as the effect mobile home construction and Cascade Steel have on the landfill. (Bob Shields reported that the hearing was properly advertised.)

Clancy Hinrichs moved that the committee recommend that the Board of Commissioners approve the proposed rate increase for Whiteson/Riverbend Landfill, effective January 1, 1982. Motion seconded and carried. (Ezra Koch abstained from voting, with all other members voting in favor of the rate increase.)

The committee discussed recycling, with Mr. Koch reporting that the County's recycling fee will be up for reconsideration in January, 1982.

Meeting adjourned.

Elaine Percy, Secretary

MINUTES

YAMHILL COUNTY SOLID WASTE ADVISORY COMMITTEE

August 26, 1981 Special Meeting

4:00 P.M., Room 105

ATTENDANCE

Members

Present

Elaine Craig, Chairman
Ezra Koch
Leonard A. Rydell
Bill Rau
Bette J. Grimm
Clarence Hinrichs
Charles Barks
Darol Funk
Mary Ellen Schwarzmann

Others

Robin Hamblet, Commissioner
Dyke Mace, Senior Sanitarian
Bob Shields, Assistant County Counsel
Mr. & Mrs. William Remior
Mr. & Mrs. Wayne Steele

- (1) The meeting was called to order by Chairman, Elaine Craig, at 4:00 P.M.
- (2) The minutes for the May 20th, 1981 regular meeting were approved as presented with mention of a misspelled name.
- (3) PUBLIC HEARING - Tire Salvage Permit Application by William C. Remior.

Mrs. Craig opened the hearing.

Bob Shields, Assistant County Counsel, stated that the matter before the Committee did not require a public hearing, but was being presented to the committee for their finding on the advisability of allowing the application based on the following criteria:

- (a) Utility of the proposed use;
- (b) Effect of the proposed use on the esthetics of the surrounding neighborhood;
- (c) Potential of the proposed use to create vector or pest breeding and/or habitat areas.

There were no abstentions and no objections to jurisdiction, but Ez Koch indicated that he would abstain from voting on this matter, but wished to participate in the discussion.

STAFF REPORT: Dyke Mace, Senior Sanitarian and Solid Waste Administrator, reported that he has visited the site in question several times and indicated that he did not feel that the fence is offensive as far as visual aspects were concerned and made a good use of old tires. Mr. Mace stated that he has no objection to the fence, if the fence is properly placed. He also recommended that the tires be filled at the time the fence is constructed rather than trying to fill the fence after it is completed. (Fill-dirt to be clean.)

The committee discussed the number of tires already installed at the Remior site (175,000) and the number Mr. Remior plans to install (approximately 10,000 to 20,000); the type of filling that Mr. Remior is using in the tires (pig manure); the type of filling that would be acceptable (clean dirt); the undergrowth that is growing over the already installed fence; and that the tire fence could possibly be a fire hazard.

APPLICANT'S CASE: The applicant, William Remior, stated that it was not feasible to fill the tires before they have settled, and attempted to describe how the tires were installed. He also indicated that he felt that the tire fence was better than woven-wire fence because the sheep could not "stick their heads through the tire fence." He referred to actions by the county that made a "mess" when they put the right-of-way through by his property and that he could not finish the tire fence until the County puts the fire-trail through by his property as the County had promised.

Mr. Remior also indicated that the double rows of tires through his property was to keep the deer from kicking the top tire off the fence and he denied that the tire fence drew rats. After some questions from the committee regarding just how much more fence was to be done and whether the tires in the fence would hold water that could breed mosquitoes, Mr. Remior's daughter, Mrs. Steele, stated that the tires became too hot because of the heat from the sun to allow the breeding of mosquitoes. Mr. Remior indicated that the tire fence was better than wire-woven fence because the posts do not get eaten up as metal posts do and that he hoped to complete the fence by 1986. His son-in-law, Wayne Steele, indicated that there was only approximately 500 feet of the fence visible to the neighbors.

The committee discussed at this time whether it might not be more appropriate to have all the members view the property in question before a decision was made. Mr. Funk indicated that he was prepared to make motion to accept Mr. Remior's application, but the committee felt that a motion was not appropriate as the meeting was not closed.

After further discussion, the committee discussed whether this venture of Mr. Remior's was a commercial venture or not (Mr. Hamblet indicated that it was), Mr. Remior's son-in-law stated that they received money only for loading the tires, not for disposing of them.

Mrs. Craig closed the hearing for deliberation and discussion by the Committee.

Bill Rau stated and indicated by a sketch he drew on the blackboard, that possibly Mr. Remior was stockpiling tires on his farm and passing it off as "building a tire-fence". He also expressed concern that Mr. Remior had not given a very good time-schedule for the completion of the tire fence. Mr. Koch expressed concern that if Mr. Remior had over 175,000 tires on his property at this time and if the fence is only half done, that possibly he will be using much more than the 10,000 to 20,000 tires Mr. reports that he needs to finish the fence. Mr. Koch also indicated that he felt Mr. Remior should present a written proposal of his plans. The committee agreed with this and indicated that this written proposal should include the following:

- (1) Details of the tires needed and the time frame to finish the fence.
- (2) The type of filling proposed to be used.
- (3) The plantings proposed to be used.
- (4) A map indicating just where the fence will be installed. (Maps available in Assessor's Office.)
- (5) A drawing indicating just how the fence is installed.
- (6) Mr. Rydell suggested that he follow the Planning Commission's procedure as to set-back requirements for fences, etc.

Mr. Rydell moved that the Solid Waste Advisory Committee's decision on the tire application be postponed until next month's meeting, September 16th, 1981 and that the committee send a letter to Mr. Remior (or his attorney) requesting the desired information. Motion seconded.

After some further discussion, Mr. Rydell moved to amend his motion to require that Mr. Remior indicate how the tires will be screened from public view and a timetable for this action. Motion seconded by Mary Ellen Schwarzmans. (Showing the type of trees, the spacing, the height, the distance from the road and if possible, draw a diagram of a typical installation showing what impact the fence will have on the surrounding properties. Mr. Shields pointed out that the committee is to only consider the portion of fence that has not been completed.

The following members voted in favor of the amendment: Craig, Rydell, Rau, Grimm, Hinrichs, Barks, and Schwarzmans. Mr. Funk voted against and Mr. Koch abstained from voting. Motion carried.

The following members voted in favor of the original motion (that the Committee's decision on the tire application be postponed until September 16th, 1981): Craig, Koch, Rydell, Rau, Grimm, Hinrichs, Barks, Koch, and Schwarzmans. Mr. Funk voted against. Motion carried.

4. Permit Modification for open burning of Stumps.

The Chairman read a letter from Angus MacPhee, President, Disposal Industries, Inc., in Newberg, asking for the Committee to favorably endorse his request for DEQ permission to modify the permit at the Newberg Landfill to allow for an annual burn to burn a collection of well-dried stumps, as it is not wise to put them into the landfill as they create gas pockets and differential settlement. The committee moved unanimously to approve his request.

5. Other

Mary Ellen Schwarzmans suggested that if anyone has not viewed Mr. Remior's tire fence that possibly it might be wise to run by there before next month's meeting.

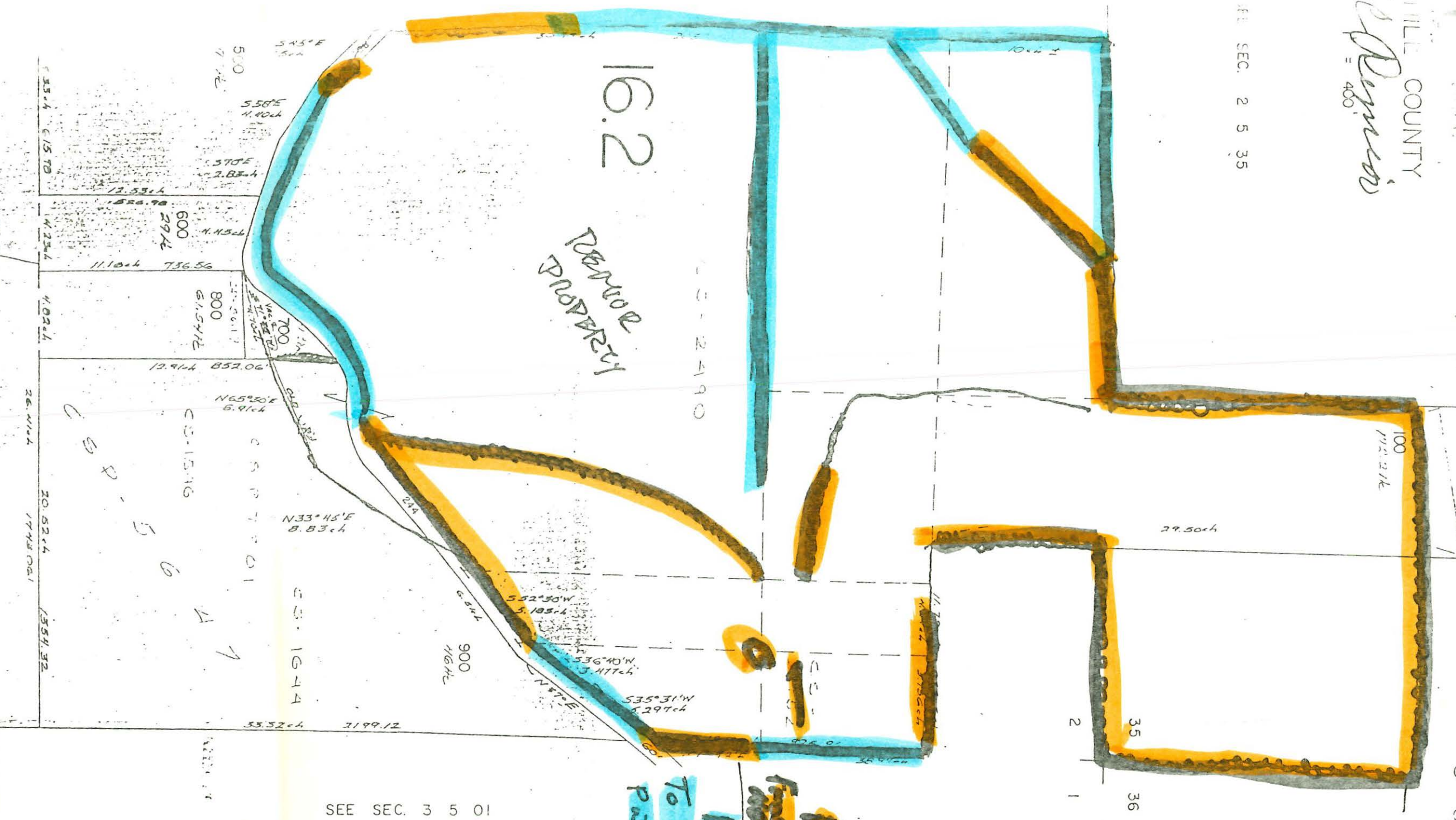
After further discussion of the Remior problem, Ez Koch addressed a resolution sent to all the committee members by Leonard Rydell, pertaining to landfills and recycling.

Meeting adjourned.

Patricia Mullen
Secretary

WILE COUNTY
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400'

SEC. 2 5 35



Red
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Blue
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SEE SEC. 3 5 01

WARD F. SCHWARZMANN, Ph.D.


P.O. Box 275
Yamhill, Oregon 97148

Jan 21, 1982

TO WHOM IT MAY CONCERN:

The City of Yamhill Fire Department has contacted me as a member of the Yamhill County Solid Waste Advisory Committee and have testified at Committee hearings as to their concern with the fire hazard presented with the accumulation of Tires on the William Remoir property. It is also my understanding that they had contacted your office in regard to their concern but recieved no response.

In addition a locan man (james Knope) contacted me during hunting s season to report the accumulation*of tires onthe back side of the aforementioned property.


Maryellen Schwarzmann
member, Yamhill Solid Waste Committee

*Mr. Knope referred to a pile of tires in a canyon.

PAUL A. HANNEMAN
State Capitol, Room H395
Salem, Oregon 97310
Phone 378-8772



why Young
cc: *Biles*
Schmidt
Dana
Osborne

Item 0
Home Address:
35010 Resort Drive
Cloverdale, Oregon 97112
District 3
Phone 965-6004

MINORITY LEADER
HOUSE OF REPRESENTATIVES

January 12, 1982

William H. Young, Director
Department of Environmental Quality
522 SW 5th
Portland, Oregon 97204

Dear Bill:

ORS 459.055 and AG Op. No. 8069 (read carefully) ought to give you some basis for action against a person placing 175,000 used vehicle tires, filled with insects and rodents, on property adjacent to other homesites.

This matter, in conjunction with your reluctance to resolve the septic tank OAR's, causes me to wonder what in the hell we should do with DEQ's budget.

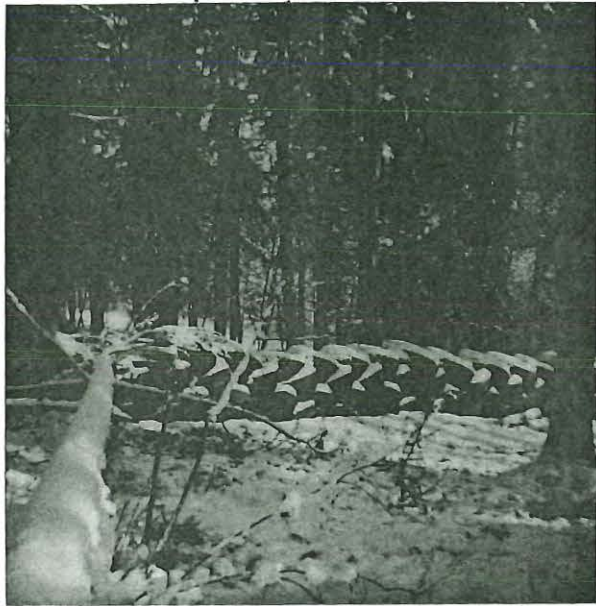
Sincerely,

Paul Hanneman
House Republican Leader

cc: Merrill Haddon
Yamhill County Commission
Tillamook County Commission

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
JAN 15 1982
OFFICE OF THE DIRECTOR

PHOTO IN FILE



Photo