

1/25/1974

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS



State of Oregon
**Department of
Environmental
Quality**

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ENVIRONMENTAL QUALITY COMMISSION

Agenda

Meeting of January 25, 1974

Public Service Building (Auditorium)
920 Southwest Sixth Avenue, Portland, Oregon

9 a.m.

- A. Minutes of December 17, 1973, EQC Meeting
- B. December Activity Report
- C. Departmental Reorganization, Status Report
- D. Tax Credit Applications

LAND QUALITY

- E. Alkali Lake Waste Disposal Site, Authority for Disposal of Stored Pesticides
- F. Adoption of Temporary Rules Pertaining to the Subsurface Disposal of Sewage
- G. Report on Tussock Moth Monitoring Proposal

NORTHWEST REGION

- H. Oregon Steel Mills (Portland), Public Hearing on Request for Modification of Compliance Schedule

MIDWEST REGION

- I. Approval of Variances Granted by Lane Regional Air Pollution Authority
 - 1. Cascade Fiber, Eugene
 - 2. Weyerhaeuser Company, Springfield

AIR QUALITY

- J. Public Hearing to Adopt Criteria for Certification of Motor Vehicle Pollution Control Systems
- K. Parking Facilities
 - 1. Benjamin Franklin Savings and Loan, Portland

WATER QUALITY

- L. Foster-Midway (Sweet Home, Linn County) Health Hazard Annexation-- Certification of Plans for Sewerage System

J. J. Gould	Banks Ore	
Sally Marks	Earl Marks	201 NE Pacific
Roger H. Webb	Simpson Plastics	Engleville, Oregon
Ken Veetters	"	"
GEORGE WAIRD	CONSULTING ENG'ER.	PORTLAND
Tom Vlasopolica	EPA/OREGON	PORTLAND
E. J. Badger	Northon Purification Inc	Beaverton
lyl Ordway	Platrap Cement, Bon	Astoria, Ore
Dean McCarver	Oregon Steel Mills	Portland
Mike Bye	City of Happy Valley	Portland
W. Kelly Woods	Nickeloro Tunnel Entry Control	Selma
Matt Nelson	EPA, Reg #	Seattle
Don Mulse	Newberg	Ore
ole Olsen	Beaverton	Ore
Bob Neumann	Oregon Steel Mills	Portland, Oregon
E. Weather	BEQ - NWRO	" "

Witness Registration

I wish to testify before the ENVIRONMENTAL QUALITY COMMISSION on:

Adoption of temporary Rules Pertaining to the
Subsurface Disposal of Sewage

you

Donald B Kempf
(signature)

Gene Contractor-Subdivider
(organization)

Witness Registration

I wish to testify before the ENVIRONMENTAL QUALITY COMMISSION on:

ADOPTION OF TEMPORARY RULES PERTAINING TO THE
SUBSURFACE DISPOSAL OF SEWAGE

William R. Brist
(signature)

HOME BUILDERS ASSOC. OF EUGENE -
(organization) SPRINGFIELD

Witness Registration

I wish to testify before the ENVIRONMENTAL QUALITY COMMISSION on:

mobile parks
sewage flow & septic tank size

V. W. Shepard
(signature)

Oregon Mobile Park Assn.
(organization)

Witness Registration

I wish to testify before the ENVIRONMENTAL QUALITY COMMISSION on:

Jim F
septic tanks

Jim Alliso
(signature)

Oregon Landowners
(organization)

Assn

Witness Registration

I wish to testify before the ENVIRONMENTAL QUALITY COMMISSION on:

SUBSURFACE RULES

George D. Ward
(signature)

George D. Ward & Assoc.
(organization)

Witness Registration

I wish to testify before the ENVIRONMENTAL QUALITY COMMISSION on:

Subject in general - F.

Chris M. Hesse
(signature)

(organization)

RON MYLES
Office of the Director



TO Shirley Shay Date 1/29

Action Required:

Also, circulate to:

Handle direct; keep me posted.

May be helpful re.

Comment and return.

EQC minute

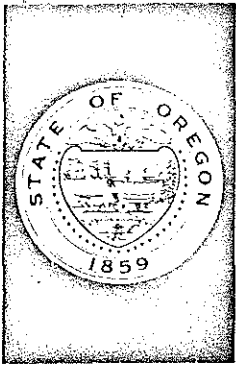
Analyze and draft recommended action.

(small virtually read the whole letter)
RM

Prepare draft for my signature.

For your information. Return _____

File: _____



→ Ron Myers PHE
State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
JAN 28 1974

DEPARTMENT OF ENVIRONMENTAL QUALITY

OFFICE OF THE DIRECTOR

TERMINAL SALES BLDG. • 1234 S.W. MORRISON ST. • PORTLAND, OREGON 97205

TOM McCALL
GOVERNOR

January 25, 1974

L. B. DAY
Director

ENVIRONMENTAL QUALITY
COMMISSION

B. A. McPHILLIPS
Chairman, McMinnville
EDWARD C. HARMS, JR.
Springfield
STORRS S. WATERMAN
Portland
GEORGE A. McMATH
Portland
ARNOLD M. COGAN
Portland

Mr. Barney McPhillips
P. O. Box 571
McMinnville, Oregon 97128

Dear Barney,

Thank you very much for your cordial letter to me about my departure from the Environmental Quality Commission. I appreciate your kind wishes for my future as Director of the new State Land Conservation and Development program.

As the Director, I'm going to have a rare and exciting opportunity to become involved with an effort which is critically important to the livability of Oregon. As you know, SB100 and the package of land use laws passed by the 1973 Legislature are a pioneering initiative to bring about effective management of our growth. Unfortunately the peculiarities of our State law forbid me to remain on the EQC while directing this new department, and I must resign effective January 31, 1974.

I'm going to miss the excitement of helping guide the important work of the EQC. During my 3½ years on the Commission, I have thoroughly enjoyed my relationship with you. The people of Oregon owe you a deep sense of gratitude for the many years of unselfish service you have generously devoted to the cause of pollution abatement and environmental cleanup. I have learned much from you - particularly the proper technique of applying "McPhillips' Law" which, simply stated, rests upon the principle of establishing firm performance deadlines and stringent regulations as the only means of successfully ensuring that we will keep Oregon a highly livable place. As I move into the regulatory phases of managing a basic resource - our land - I will have many opportunities to apply this philosophy.

During my term on the EQC, I was fortunate to have been associated with incisive, publicly-motivated Commissioners. Our meetings have been the scene of many important decisions and I am glad to have been able to make a contribution to them. The Department Directors with whom I've served - first Ken Spies, then L. B. Day, and now

Mr. Barney McPhillips
January 25, 1974
Page Two

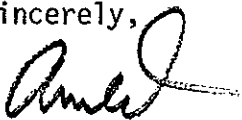
Diarmuid O'Scannlain and our vigorous staff have really done a superb job of administering our programs and I'm looking forward to working with them as their colleague in State Government.

Naturally, it's the achievements that make participation on the EQC so worthwhile and I'm proud to have been involved with some of them - such as the preparation of a statewide air quality plan, agreement with Federal agencies for one-step waste water discharge permits, extensive involvement of citizens in formulating new programs, and initiation of a program for solid waste disposal regulation. All these have helped us maintain Oregon's leadership in environmental protection.

Of course, some problems continue to plague us and I wish you well in finding adequate solutions. Leading the list is the Amax Plant in Warrenton. I'm hopeful that no discharge permit will be granted to the company until a thoroughly exhaustive environmental analysis demonstrates that there are no adverse social, economic, energy or physical impacts. Keeping the Federal red tape to a minimum and support to a maximum is a never-ending hassle. If Washington, D.C. will just keep its hands off our Northwest EPA personnel, I think the fine relationship that we've built will continue to work. Obtaining funds for a new DEQ lab should be a high priority item. It is a potential disaster in its present location. The Legislature should act swiftly to allow us to correct the disgraceful condition under which we've asked our staff to work. Finally, it has long been my concern that our program of environmental quality protection has not been related closely enough to other activities such as transportation, housing, urban planning and land use. Fortunately Oregon now has a package of land use laws which require a more integrated and comprehensive approach to growth management. SB 100 gives the authority for initiating the coordination of such significant activities to the new department I'll be directing. I promise you, the other Commissioners and staff that I will do my best to involve you deeply in the work ahead and help in any way I can to further the good work you have accomplished.

Thank you for your friendship and pleasant associations.

Sincerely,



Arnold M. Cogan
6436 S.E. Morrison Street
Portland, Oregon 97215

cc: Governor Tom McCall
Diarmuid O'Scannlain

MINUTES OF THE FIFTY-SECOND MEETING
of the
Oregon Environmental Quality Commission
December 17, 1973

Public notice having been given to the news media, other interested persons and the Commission members, as required by law, the fifty-second meeting of the Environmental Quality Commission was called to order by the Chairman at 9:30 a.m. on Monday, December 17, 1973, in Harris Hall, East Eighth and Oak Streets, Eugene, Oregon. The Commission members present were B. A. McPhillips, Chairman, Arnold M. Cogan, Dr. Morris K. Crothers, Dr. Grace S. Phinney, and Mrs. Jacklyn L. Hallock.

The Department was represented by Director Diarmuid F. O'Scannlain, Deputy Director Ronald L. Myles, Assistant Directors Wayne Hanson, Fred Bolton and Bob Jackman; staff members Ron Householder, Tom Guilbert, Harold Burkitt, Bob Gilbert, Dave O'Guinn, Rich Reiter, B. J. Seymour and Shirley Shay, and Chief Legal Counsel Ray P. Underwood.

MINUTES OF THE NOVEMBER 26-27, 1973 COMMISSION MEETING

It was MOVED by Dr. Crothers, seconded by Dr. Phinney and carried that the minutes of the fifty-first meeting of the Commission held in Portland on November 26-27, 1973 be approved as prepared.

PROPOSED 1974 COMMISSION MEETING SCHEDULE

Director O'Scannlain presented a proposed 1974 meeting schedule for the Commission, explaining that it would accomplish two primary purposes-- establish a regular meeting day and allocate meeting sites to cover each of the five regions of the Department at least once. Following a brief discussion, it was MOVED by Dr. Crothers and seconded by Dr. Phinney that meetings outside the Willamette Valley be held on Fridays rather than Mondays. Further discussion indicated that it would be more convenient to hold all meetings of the Commission on Fridays, and the motion was withdrawn.

It was then MOVED by Dr. Crothers, seconded by Dr. Phinney and carried that the Friday preceding the fourth Monday of each month be established as the regular meeting day for the Commission.

Dr. Crothers asked that the staff look into the feasibility of chartered bus service to meeting locations outside the Willamette Valley.

ACTIVITY REPORT FOR NOVEMBER 1973

Mr. Myles presented the memorandum report of actions taken by the Department during the month of November 1973, regarding the following 45 domestic sewerage, 3 industrial waste, 8 air quality control and 5 solid waste management projects:

Water Quality Control

Municipal Projects (45)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11-1-73	The Dalles	West Second Street sewer	Prov. approval
11-1-73	Sweet Home	Harding Street sewer	Prov. approval
11-2-73	Gresham	Pinebrook #2 Subd. sewer	Prov. approval
11-2-73	Salem (Willow Lake)	Sanitary sewer repairs, W.O. #6836-S	Prov. approval
11-7-73	Salem (Willow Lake)	Hayesville Estates Subd. #1 and 2 sewer	Prov. approval
11-7-73	Salem (Willow Lake)	Hilfiker Lane sewer	Prov. approval
11-7-73	Gresham	Powell Valley Road sewer	Prov. approval
11-7-73	Inverness	Change Order #3, Unit 5A-2, sewer	Approved
11-7-73	Clackamas County Service Dist. #1	Phase I, Schedule LK, Change Order No. 4; Phase II, Schedule MT, Change Order No. 2	Approved
11-7-73	Gladstone	Pump station modifications and force main	Prov. approval
11-7-73	Bear Creek Valley Sanitary Authority	West Medford trunk	Prov. approval
11-14-73	Black Butte Ranch	South Meadow First Addition and pump stations 10, 11 & 12	Prov. approval
11-14-73	East Salem Sewer & Drainage Dist. I	Phipps Lane N.E., sewers	Prov. approval
11-14-73	Deschutes County	Rimrock West Subd. sewers, sewage pump station, and sub- surface disposal for Phase I - 24 lots	Prov. approval
11-14-73	Stayton	Change Order No. 1, sewage treatment plant contract	Approved
11-14-73	Ashland	Addendum No. 1, sewage treatment plant contract	Approved
11-14-73	Gresham	Change Order No. 1, sewage treatment plant contract #1	Approved
11-14-73	Springfield	Project SP-136 sanitary sewer	Prov. approval
11-14-73	Josephine County	Harbeck-Fruitdale Service District sewers (1) Sky Crest Drive (2) Drury Lane	Prov. approval
11-14-73	Linn County	Diamond Hill lagoon chlorination	Prov. approval

Municipal Projects (45) - continued

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11-15-73	Lake Oswego	Westridge Subd. sewers	Prov. approval
11-15-73	Multnomah County (East)	Benn's Addition sewers	Prov. approval
11-15-73	USA (Aloha)	Digester roof rehabilitation	Prov. approval
11-15-73	Tualatin	S.W. 89th and 93rd sewers	Prov. approval
11-15-73	Depoe Bay San. Dist.	Sewage collection and treatment plant--0.80 MGD activated sludge plus chlorination	Prov. approval
11-16-73	Umatilla	Change Order No. 4, sewage treatment plant contract	Approved
11-16-73	Harrisburg	Bruner Subd. sewers	Prov. approval
11-19-73	Jefferson	Grice Acres Subd. First Addition sewers	Prov. approval
11-19-73	Corvallis	Human Resources Center sewer	Prov. approval
11-19-73	Ashland	Hunter Park Subd. sewers	Prov. approval
11-20-73	Keizer Sewer Dist.	Pleasant View Drive sewer	Prov. approval
11-20-73	Stayton	Wilmington Place sewers	Prov. approval
11-20-73	Dundee	Linden Lane sewers	Prov. approval
11-20-73	Hillsboro	Brookwood Avenue sewer	Prov. approval
11-23-73	Dunthorpe-Riverdale County Service Dist.	Lot 28, Abernathy Heights sewer	Prov. approval
11-23-73	Tualatin	Paul Schatz Property sewer	Prov. approval
11-26-73	Vernonia	Change Order No. 4, interceptor contract	Approved
11-26-73	Bend	Northeast Bend force main and gravity sewer	Prov. approval
11-26-73	Round Lake Estates	Sewage pumping station and force main	Prov. approval
11-27-73	North Bend	Liberty Street sewer	Prov. approval
11-28-73	Oak Lodge Sanitary District	Ina Terrace Subd. sewers	Prov. approval
11-28-73	Clackamas County Service District	Phase II, Change Order #5, and Phase III, Change Order #1, interceptors	Approved

Industrial Projects (3)

11-2-73	Tillamook	Publishers Paper Company waste water control facility improvements	Prov. approval
11-9-73	La Grande	R-D Mac, Inc., gravel plant waste water treatment system	Prov. approval
11-29-73	Portland	Oregon Steel Mills, Rivergate plant, Spill Prevention and Contingency Plan	Prov. approval

Air Quality Control (8)

11-6-73	Multnomah	North Pacific Lumber Company 60-space parking facility	Approved
11-9-73	Tillamook	Publishers Paper Company Installation of hog-fuel boiler blow-off noise control	Approved

Air Quality Control (8) - continued

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
11-9-73	Multnomah	Liberty House/Jantzen Beach 214-space parking facility	Req. add'l info.
11-14-73	Multnomah	Oregon Steel Mills 74-space parking facility	Req. add'l info.
11-14-73	Washington	Tektronix, Inc. 170-space and 590-space parking facilities	Req. add'l info.
11-15-73	Washington	General Telephone Company 90-space parking facility	Approved
11-19-73	Multnomah	Halsey Street Office Building and Restaurant	Cond. approval
11-19-73	Lincoln	153-space parking facility Georgia-Pacific Corporation Installation of two smelt dissolving tank scrubbers	Approved

Solid Waste Management (5)

11-1-73	Josephine	Grants Pass Sanitary Landfill Existing Garbage Site Leachate Control Plan	Prov. approval
11-14-73	Multnomah	West Delta Park New Demolition Landfill Operational Plan	Approved
11-14-73	Marion	Woodburn Landfill Existing Garbage Site Operational Plan	Prov. approval
11-16-73	Klamath	Weyerhaeuser - Bly New Wood Waste Site Operational Plan	Approved
11-30-73	Harney	Edward Hines Lumber Existing Wood Waste Site Operational Plan (Letter Authorization)	Prov. approval

Mr. Cogan asked what procedures were followed by staff to incorporate provisions that there be some transit usage before determining need for parking facilities. Mr. Hanson replied that transit availability is always considered in connection with proposed parking facilities, particularly in the Portland core area where the Transportation Control Strategy applies.

It was MOVED by Dr. Phinney, seconded by Mr. Cogan and carried that Department actions as reported be approved.

TAX CREDIT APPLICATIONS

It was MOVED by Mr. Cogan, seconded by Dr. Crothers and carried that as recommended by the Director, Pollution Control Facility Tax Credit Certificates be issued to the following applicants for facilities claimed in the respective

2 applications with the costs listed being 80 percent or more allocable to pollution control:

<u>Applicant</u>	<u>Appl. No.</u>	<u>Claimed Cost</u>
Weyerhaeuser Company	T-479	\$ 55,673.00
Raw Materials		
Barker Manufacturing Co.	T-491	44,094.63
Woolley Enterprises Inc.	T-492	93,111.00
Smith River Lumber Co.		
Woolley Enterprises Inc.	T-493	20,499.00
Smith River Lumber Co.		
Georgia-Pacific Corp.	T-499	24,289.71
Eugene/Springfield Div.		
Georgia-Pacific Corp.	T-500	47,216.53
Eugene/Spring Div.		
Woolley Enterprises, Inc.	T-501	122,557.00
Mt. Baldy Mill		
Woolley Enterprises, Inc.	T-502	54,268.00
Drain Plywood Company		
Woolley Enterprises, Inc.	T-503	207,321.00
Drain Plywood Co.		
Woolley Enterprises, Inc.	T-504	67,013.00
Smith River Lumber Co.		
Georgia-Pacific Corp.	T-494	36,912.45
Eugene/Springfield Div.		
Georgia-Pacific Corp.	T-495	23,002.79
Eugene/Springfield Div.		
Georgia-Pacific Corp.	T-497	46,976.20
Eugene/Springfield Div.		
Mazama Timber Products, Inc.	T-505	70,711.97
Georgia-Pacific Corp.	T-506	71,260.72
Eugene/Springfield Div.		
Georgia-Pacific Corp.	T-507	106,648.19
Coos Bay Div.		
Georgia-Pacific Corp.	T-508	63,559.98
Coos Bay Div.		
Georgia-Pacific Corp.	T-510	33,500.00
Toledo Div.		
Georgia-Pacific Corp.	T-511	96,368.00
Toledo Div.		
Bohemia, Inc.	T-512	70,288.37
Cascade Fiber Div.		
Bohemia, Inc.	T-513	40,854.15
Cascade Fiber Div.		
Bohemia, Inc.	T-514	19,333.98
Cascade Fiber Div.		
Bohemia, Inc.	T-515	164,533.74
Culp Creek Div.		
Bohemia, Inc.	T-516	133,258.42
Culp Creek Div.		
Bohemia, Inc.	T-517	94,125.00
Culp Creek Div.		
The Hervin Company	T-519	12,236.00

Tax Credit Applications (29) - cont.

<u>Applicant</u>	<u>Appl. No.</u>	<u>Claimed Cost</u>
Union Carbide Corp. Ferroalloys Div.	T-488	\$38,220.00
Union Carbide Corp. Ferroalloys Div.	T-489	518,526.00
Georgia-Pacific Corp. Coos Bay Div.	T-509	18,391.92

AUTHORIZATION FOR PUBLIC HEARING TO ESTABLISH CRITERIA FOR CERTIFICATION OF MOTOR VEHICLE POLLUTION CONTROL SYSTEMS

Mr. Householder presented the Department's memorandum report and Director's recommendation dated December 10, 1973, requesting authorization to hold a public hearing to adopt criteria for certification of motor vehicle pollution control systems. Mr. Householder explained that the 1971 Legislative Assembly required that a motor vehicle emission control inspection program be established and directed the Commission to specify program criteria and standards based upon either the addition of pollution control equipment to motor vehicles (retrofit) or by engine adjustment or modification. The Portland Transportation Control Strategy includes a motor vehicle emission control program based on inspection and maintenance, but also contains a retrofit requirement for initiation in 1975 if the inspection/maintenance program does not achieve projected results. The purpose of the public hearing would be to provide the Commission with testimony for consideration in adopting criteria for an inspection/maintenance program, thus precluding approval of retrofit devices as certified systems during the first year of operation of the emission control program.

It was MOVED by Dr. Phinney, seconded by Mr. Cogan and carried that a public hearing be held before the Commission in Portland, Oregon on January 25, 1974, concerning proposed initial criteria for certification of motor vehicle pollution control systems.

PUBLIC FORUM

Mr. McPhillips invited members of the general public to voice any environmental concerns they might have directly to the Commission members.

Mr. Ezra Koch, President, Oregon Sanitary Services Institute, spoke on the proposed financing of the \$15 million program contained in the MSD solid waste study. He commented that approximately \$500,000 had been spent

in the last five years on four solid waste studies in the metropolitan area, and that the \$325,000 MSD study contained nothing new. He felt that all available alternatives had not been presented and asked for an opportunity to present the expert views of the operators themselves. Mr. McPhillips asked Mr. Koch and his organization to submit comments and recommendations in writing.

Mr. Bob Bushnell, Springfield School District, requested the EQC to grant a postponement of the fee requirement for permits to operate the district's boilers. The original request for postponement had been made to the Lane Regional Air Pollution Authority which said it did not have authority to grant it. Director O'Scannlain stated that the law requires every polluter to pay a fee in order to get a permit, including public entities. He said that the Department would work with the school districts on this problem, and would investigate the possibility of deferred billing. He invited Mr. Bushnell to remain for the next agenda item in which this matter would be more fully discussed.

No other members of the public wished to testify.

ADOPTION OF AMENDMENTS TO RULES PERTAINING TO AIR CONTAMINANT DISCHARGE PERMITS

Mr. Burkitt presented the Department's memorandum report and Director's recommendations regarding the public hearing held by the Commission on November 27, 1973, for the purpose of receiving testimony on proposed amendments to OAR Chapter 340, Sections 20-033.02 through 20-033.20. The proposed amendments and the modification of Table A would clarify certain sections, add new source categories required to obtain a permit, and authorize permits and fees for new sources. Following the public hearing, the staff met with representatives of industry to resolve those areas where testimony indicated conflicts or where further clarification was needed.

Discussion followed on the issue of the payment of permit fees by school districts. The Director recalled that in the Ways and Means subcommittee where this matter was briefly discussed, no differentiation was made between public and non-public polluters. He also encouraged school districts and other public bodies to try to bring the problem before the special session of the Legislative Assembly, and said that in addition, he would pursue through the Department's Attorney General staff, how much latitude the DEQ has in this matter.

Mr. Tom Donaca, Associated Oregon Industries, raised two points. First, he suggested that the 30-day notice requirement be adopted for all programs--air, water and solid waste management. The second had to do with the sulphur dioxide emission standard. Regarding the latter, he requested that the Commission, because of the energy situation, determine if it has variance authority. He said that industry might not be able to meet the July 1, 1974 date for the sulphur reduction requirement, that is, from 2.5% sulphur by weight to 1.75% sulphur by weight. If industry is not able to meet this sulphur reduction requirement, they might need to apply for permission to operate beyond the July 1, 1974 deadline at 2.5% sulphur by weight or even greater if it is decided that dirtier fuels are to be consumed in areas of the country that can tolerate more degradation. He asked that the Commission give the Director authority to grant variances for fuel burning equipment and suppliers to supply same under standards to be set by the Commission until the matter can be brought to the Commission for action.

Mr. O'Scannlain commented that the Department was seriously considering these problems and their far-reaching implications. He said the Department was looking closely at the non-degradation clause under Oregon law to determine what parts of the state would take more degradation. The staff was also trying to get a better handle on what the federal policy will be in terms of fuel allocations and the possibility that the dirtiest fuels might be sent to the cleanest parts of the country, which would include Oregon.

The Director and the Chairman reiterated that present standards will be maintained and that the Department and the Commission are aware of the sensitivity of the problem and the necessity for a case-by-case approach to its solution.

It was MOVED by Mr. Cogan, seconded by Dr. Phinney and carried that the Director's recommendation for adoption of the proposed amendments to OAR Chapter 340, Sections 20-033.02 through 20-033.20 be approved. A copy of the rules as amended by this motion is attached to and made a part of these minutes.

PROPOSED AGREEMENT BETWEEN LANE REGIONAL AIR POLLUTION AUTHORITY AND DEQ WITH REGARD TO DEQ'S MIDWEST REGION

Mr. O'Scannlain presented his report and recommendation concerning the proposed agreement between Lane Regional Air Pollution Authority (LRAPA) and the DEQ with regard to DEQ's Midwest Region. He explained the rationale for the agreement which provides for an effective, combined environmental program while maintaining the integrity of both organizations. He noted

that the field burning program would be retained at Headquarters. He explained the terms of the agreement and asked the Commission for permission to present the proposal to the Emergency Board for approval.

Mr. Verner Adkison, Administrator of LRAPA, and administrator-designate of the DEQ's Midwest Region, told the Commission that on December 13, 1973, LRAPA's Board of Directors had tentatively accepted the agreement as outlined. He said he had also received comments from industry and the public favorable to this integrated approach.

Discussion followed on employee relationships and jurisdictional authority. Joe Richards, LRAPA attorney, answered questions.

It was MOVED by Mr. Cogan, seconded by Dr. Phinney and carried that the Commission approve the proposal as described in the agreement and authorize the Director to proceed with the Emergency Board approval request.

VARIANCE REQUEST--WOOLLEY ENTERPRISES, INC.

Mr. Burkitt presented the Department's memorandum report and Director's recommendation dated December 7, 1973, regarding the request of Woolley Enterprises, Inc., Smith River Lumber Division, Drain, Oregon, to receive a variance from OAR Chapter 340, Section 25-020(1), Emission and Operation Standards for Wigwam Waste Burners, which specifies that emissions from a wigwam waste burner cannot exceed an opacity of 20 percent for a period or periods aggregating more than three minutes in any one hour. Smith River Lumber Company has been using diesel oil-fired auxiliary ignitors in its burner in order to comply with this standard, but because of the energy situation, fuel oil is no longer available for the auxiliary firing system. Without auxiliary fuel, the burner cannot be brought up to operating temperature in less than approximately seven minutes.

Mr. Morrison of Woolley Enterprises, Inc. was present to answer questions.

Mr. O'Scannlain noted that this was the first request for a variance directly attributable to the energy crisis.

It was MOVED by Dr. Phinney, seconded by Mr. Cogan and carried that Director's recommendation to grant Smith River Lumber Company's variance request subject to the conditions outlined be approved.

VARIANCE REQUEST--CROWN ZELLERBACH CORPORATION

Mr. Gilbert presented the Department's memorandum report and Director's recommendation dated December 5, 1973, concerning the request of Crown Zellerbach Corporation, Wauna Mill, Clatsop County, for a variance from OAR Chapter 340, Section 23-010(1)(a) to permit the open burning of non-reusable pallets and non-recyclable paper until June 1, 1975, in accordance with a program proposed by the company.

Mr. Gilbert explained that the company had open burned its waste until August 1973, when it applied for formal approval of its solid waste disposal program. The Department, however, did not find landfilling in the company's solid waste sites either feasible or desirable because of the nature and quantities of waste involved. While alternatives to open burning are immediately available, the company is actively studying three alternatives, all involving types of incineration. In a letter to the Department, the company stated that it would decide on an alternative to open burning and submit plans to the Department no later than July 1, 1974.

Mr. Larry Broeren, Assistant Resident Manager of the Wauna Plant, discussed the methods of waste disposal being considered by the company.

It was MOVED by Dr. Crothers, seconded by Mr. Cogan and carried that the Director's recommendation to grant the variance request with attached conditions be approved.

ADOPTION OF EMERGENCY RULES FOR REAL ESTATE DISCLOSURES REGARDING SEWAGE DISPOSAL

Mr. Jackman presented the Department's memorandum report and Director's recommendations dated December 7, 1973, proposing the adoption of temporary procedural rules to implement requirements of House Bill 2607 (Chapter 421, Oregon Laws 1973). This 1973 law, which becomes effective on January 1, 1974, will require land developers to register land developments with the Real Estate Commissioner and to obtain DEQ approval of the available or proposed method of sewage disposal.

Mr. O'Scannlain noted that under existing law there is no requirement that a fee be established by the Department for issuing a certificate of approval.

Mr. Klaus of Springfield asked for clarification of the 60-day time

period for issuance of a certificate. He also asked if existing subdivisions in which three or more lots remain unsold would be subject to the new law. Mr. O'Scannlain replied that the Real Estate Commissioner's office would have to determine that issue.

Mr. James Allison of Sherwood wanted to know if counties which had not contracted with the DEQ with respect to the statewide permit program for subsurface sewage disposal could charge a fee. Mr. O'Scannlain replied that the statute does not provide for a fee that could be charged either by a county or the Department. Mr. Ray Underwood, Chief Legal Counsel for the Department, confirmed Mr. O'Scannlain's statement, adding that certain other statutes may enable charging such a fee if locally authorized.

Mr. Bruce Anderson, Eugene attorney, inquired about the continuance of a feasibility letter and its application to single lot owners.

It was MOVED by Mr. Cogan, seconded by Dr. Phinney and carried that as recommended by the Director, the Commission adopt the proposed rules for real estate disclosures regarding sewage disposal as temporary rules of the Commission, to become effective January 1, 1974 (copy attached).

PUBLIC HEARING ON AND ADOPTION OF RULES PERTAINING TO THE SUBSURFACE DISPOSAL OF SEWAGE

Mr. O'Guinn presented the Department's memorandum report dated December 15, 1973, concerning rules pertaining to the subsurface disposal of sewage, noting that the temporary rules adopted by the Commission on October 5, 1973, would expire February 2, 1974. In order to prepare permanent rules for the Commission's consideration, the Department had requested and received authorization from the Commission at its November 26, 1973 meeting to hold public hearings before a hearings officer at ten locations in Oregon. Mr. O'Guinn said that the Hearings Officer's report was appended to the staff memorandum, together with a copy of the proposed permanent rules. He then discussed the nine major sections of the proposed rules--Definitions; Procedures for Issuance or Denial of Subsurface Sewage Disposal Permits; Subsurface Sewage Disposal Systems; Septic Tanks; Disposal Areas; Distribution Techniques; Nonwater-Carried Waste Disposal Facilities; Sewage Disposal Service; and Appendix--and indicated areas that needed further revision.

Following Mr. O'Guinn's report and prior to the presentation of the Director's recommendation, Mr. O'Scannlain called on Mr. Guilbert, DEQ Hearings Officer, for a summary of the information presented at the public hearings. Mr. Guilbert reported that he had attended all 17 hearings, and on the basis of the

considerable amount of technical material presented, recommended that the Commission defer action on the adoption of the rules until the Department's staff had had an opportunity to evaluate the information and incorporate it as appropriate.

Mr. O'Scannlain stated that the Department was not in a position to recommend adoption of final rules on this date, and proposed that the Commission hear additional testimony at the meeting and defer final consideration and adoption until January 4, 1974. He further proposed that the hearings be officially closed on December 21, 1973, with written testimony received until 5 p.m. that date, and the final proposed rules be circulated by December 28, 1973. He explained that deferring action until January 25, 1974, the next regularly scheduled meeting of the Commission, would delay the effective date of the rules until mid-February, thus leaving a period of time in which no rules would be applicable.

Before voting on the issue, Mr. McPhillips invited testimony from persons attending the meeting.

Senator Hector Macpherson of Albany commented on a philosophy of what subsurface sewage disposal ought to be, noting that there are three primarily false assumptions associated with this type of disposal:

1. urban sprawl should be stopped by stopping septic tank permits
2. septic tanks are considered to be environmentally polluting and therefore should be discouraged
3. subsurface sewage disposal is unreliable and therefore should be limited to good soils only.

He stated that Oregon now has the means to control urban sprawl, but that differences must be established between areas about to be sewered and those that would remain essentially rural. He read from a report published by the College of Engineering Sciences at Arizona State University that supported subsurface systems in low density areas. As to the unreliability of subsurface systems, he said that how people handle them determines their survival curve, and this factor should be considered as well as soil type. He also requested some type of public monitoring system of septic tanks. He urged further revision of the proposed rules and offered his assistance.

Mr. Ron McKeith of Portland, represented Mr. Taggart, a small subdivision owner and member of the Washington County Landowners Association, whose subdivision had been platted and approved and who was now concerned about additional procedural requirements.

Mr. James Allison, Sherwood, President of the Washington County Land-owners Association, submitted prepared testimony and distributed amendments relating to the low density section of the proposed rules.

Mr. George Ward, an environmental consulting engineer from Portland, distributed copies of a letter which he read, supporting land disposal of sewage rather than mechanical treatment. He also objected to the requirements of the low density section of the proposed rules.

Dr. Crothers asked Mr. Ward if the 250-foot requirement was the major issue in the low density section. Mr. Ward replied that it wasn't just the distance, that the inequity came about because a property owner must have practically an ideal site in order to get a septic tank permit.

Mr. Jack Kephart, Springfield, President of the Eugene-Springfield Home-builders Association, asked for clarification of the replacement area rule. Mr. O'Guinn said that this was a carryover from the rules adopted by the Health Division and that the staff retained it because they concurred that it was necessary to have a separate area in which to replace or repair a subsurface system. Mr. Kephart wanted to know the status of previously approved subdivisions. Mr. O'Scannlain replied that as regards the replacement area rule, if the Health Department had previously approved a subdivision, the DEO would accept that approval.

Mr. Kenneth Reading of Beaverton also spoke against the low density provisions of the proposed rules.

Mr. Pat Gould of Banks discussed an 800-acre subdivision outside Roseburg for which he had received verbal but not written approval from the Health Division regarding septic tank installation. He stated that he did not feel he could secure approval for permits under the proposed Department rules.

Mr. Ward again spoke in support of Senator Macpherson's suggestion for monitoring the operation of subsurface systems and asked that the new rules include a preventive maintenance program requirement.

Mr. Bob Jones of Springfield wanted to know if section 7 on page 39 precluded the consideration of methods of disposal of human wastes that do not require water. Mr. O'Guinn replied that only flush toilets were permitted, and that this was in keeping with the internal plumbing systems available nationally and required for new buildings under the new Uniform Building Code.

Mr. Ray Walter of Eugene supported Mr. Ward's request for a preventive maintenance program for subsurface systems.

No other members of the public wished to testify, and Mr. McPhillips closed the hearing of December 17th.

Director O'Scannlain asked that his recommendation given orally following Mr. O'Guinn's presentation of the staff memorandum be substituted for the written recommendation; that is, that the Commission meet in special session in Portland on January 4, 1974, for the purpose of considering further revisions to and final adoption of the proposed rules. He said that if the Commission felt that more time was required, it would be possible to take action on January 25th on an emergency rule basis. Mr. Underwood explained that upon adoption, temporary rules would become effective immediately.

It was MOVED by Dr. Crothers, seconded by Mr. Cogan and carried that the final decision on this matter be set for January 25, 1974 in Portland.

There being no further business to come before the Commission, the Chairman adjourned the meeting at 3:35 p.m.

attachments

Proposed
Temporary Rules
Establishing Procedures for Processing of
Application for Approval Statement for Proposed Method of Sewage Disposal

- (1) Definitions contained in Chapter 835, Oregon Laws 1973 (SB77) shall apply as applicable.
- (2) Any person who is required under Chapter 421, Oregon Laws 1973, to furnish a disclosure statement pursuant to rules of the Real Estate Commissioner for the sale or transfer of interest in a land development and pertaining to the proposed method of sewage disposal may submit to the Department an application for approval of proposed sewage disposal on a form provided by the Department. Applications must be submitted at least 60 days before a statement is needed. All application forms shall be completed in full and signed by the applicant or his legally authorized representative.
- (3) Applications which are obviously incomplete, unsigned or which do not contain the required exhibits will not be accepted by the Department and will be returned to the applicant for completion.
- (4) If the Department determines that additional information is needed it will promptly request the needed information from the applicant. The application will not be considered complete for processing until the requested information is received. The application will be considered to be withdrawn if the applicant fails to submit the requested information within 90 days of the request.
- (5) Applications which are complete will be processed by the Department and a statement will be furnished to the applicant indicating whether or not the proposed method of sewage disposal for each individual lot, parcel or unit is approved by the Department, and listing any condition or limitations placed on such approval, including, but not limited to, location or capacity of the proposed sewage disposal system.

AIR CONTAMINANT DISCHARGE PERMITS

- 20-033.02 PURPOSE. The purpose of these regulations is to prescribe the requirements and procedures for obtaining Air Contaminant Discharge Permits pursuant to ORS 449.727 to 449.739 and related statutes for stationary sources.
- 20-033.04 DEFINITIONS. As used in these regulations unless otherwise required by context:
- (1) "Department" means Department of Environmental Quality.
 - (2) "Commission" means Environmental Quality Commission.
 - (3) "Person" means the United States Government and agencies thereof, any state, individual, public or private corporation, political subdivision, governmental agency, municipality, industry, co-partnership, association, firm, trust, estate, or any other legal entity whatever.
 - (4) "Permit" or "Air Contaminant Discharge Permit" means a written permit issued by the Department or Regional Authority in accordance with duly adopted procedures, which by its conditions authorizes the permittee to construct, install, modify or operate specified facilities, conduct specified activities, or emit, discharge or dispose of air contaminants in accordance with specified practices, limitations or prohibitions.
 - (5) "Regional Authority" means the Mid-Willamette Valley Air Pollution Authority or the Lane Regional Air Pollution Authority.
- 20-033.06 NOTICE POLICY. It shall be the policy of the Department of Environmental Quality and Regional Authority to issue public notice as to

Air Contaminant Discharge Permits (continued)

the intent to issue an Air Contaminant Discharge Permit allowing at least thirty (30) days for written comment from the public, and from interested State and Federal agencies, prior to issuance of the permit.

20-033.08 PERMIT REQUIRED. (1) No person shall construct, install, establish, develop or operate any air contaminant source, including those processes and activities directly related or associated thereto which are listed in Table A, appended hereto and incorporated herein by reference, without first obtaining a permit from the Department or Regional Authority.

(2) No person shall, without first obtaining a permit from the Department or Regional Authority, construct, install, establish, develop or operate any new air contaminant source not listed in Table A which would emit:

- (a) 10 tons or more per year, if the source were to operate uncontrolled, of any air contaminants including, but not limited to, particulates, SO_x, NO_x, or hydrocarbons; or
- (b) malodorous emissions, as determined by Departmental or Regional Authority review of sources which are known to have similar air contaminant emissions.

(3) Any source listed in Table A may apply to the Department or Regional Authority for a special letter permit if operating a facility with no, or insignificant, air contaminant discharges. The determination of applicability of this special permit shall be made solely by the Department or Regional Authority having jurisdiction. If issued a special permit, the Application Investigation and Permit Issuing or Denying Fee and/or Annual

Permit Compliance Determination Fee, provided by Section 20-033.12, may be waived by the Department or Regional Authority.

20-033.10 MULTIPLE-SOURCE PERMIT. When a single site includes more than one of the air contaminant sources listed in Table A, a single permit may be issued including all sources located at the site. For uniformity such applications shall separately identify by subsection each air contaminant source included from Table A.

- (1) When a single air contaminant source which is included in a multiple-source permit, is subject to permit modification, revocation, suspension or denial, such action by the Department or Regional Authority shall only affect that individual source without thereby affecting any other source subject to that permit.
- (2) When a multiple-source permit includes air contaminant sources subject to the jurisdiction of the Department and a Regional Authority, the Department may require that it shall be the permit issuing agency. In such cases, the Department and the Regional Authority shall otherwise maintain and exercise all other aspects of their respective jurisdictions over the permittee.

20-033.12 FEES. (1) All persons required to obtain a permit shall be subject to a three-part fee consisting of a uniform non-refundable Filing Fee of \$25.00, a variable Application Investigation and Permit Issuing or Denying Fee and a variable Annual Permit Compliance Determination Fee. The amount equal to the Filing Fee and the Application Investigation and Permit Issuing or Denying Fee shall be submitted as a required part of the application. The Annual Permit Compliance Determination Fee shall be paid prior to issuance of the actual permit.

Air Contaminant Discharge Permits (continued)

- (2) The fee schedule contained in the listing of air contaminant sources listed in Table A appended hereto shall be applied to determine the variable permit fees, on a Standard Industrial Classification (SIC) plant site basis, except that for multiple devices of fuel burning equipment, fees may be increased by twenty percent (20%).
- (3) The Filing Fee and Application Investigation and Permit Issuing or Denying Fee shall be submitted with each application for a new permit, modified permit, or renewed permit.
- (4) Modifications of existing, unexpired permits which are instituted by the Department or Regional Authority due to changing conditions or standards, receipts of additional information or any other reason pursuant to applicable statutes and do not require re-filing or review of an application or plans and specifications shall not require submission of the Filing Fee or the Application Investigation and Permit Issuing or Denying Fee.
- (5) Applications for multiple-source permits received pursuant to Section 20-003.10 shall be subject to a single \$25.00 Filing Fee. The Application Investigation and Permit Issuing or Denying Fee and Annual Permit Compliance Determination Fee for multiple-source permits shall be equal to the total amounts required by the individual sources involved, as listed in Table A.
- (6) At least one Annual Permit Compliance Determination Fee shall be paid prior to final issuance of a permit. Thereafter, the Annual Permit Compliance Determination Fee shall be paid at least thirty (30) days prior to the start of each subsequent permit year. Failure to timely remit the Annual Permit Compliance Determination

Fee in accordance with the above shall be considered grounds for not issuing a permit or revoking an existing permit.

- (7) If a permit is issued for a period less than one (1) year, the applicable Annual Permit Compliance Determination Fee shall be equal to the full annual fee. If a permit is issued for a period greater than twelve (12) months, the applicable Annual Permit Compliance Determination Fee shall be prorated by multiplying the Annual Permit Compliance Determination Fee by the number of months covered by the permit and dividing by twelve (12).
- (8) In no case shall a permit be issued for more than five (5) years.
- (9) Upon accepting an application for filing, the Filing Fee shall be considered as non-refundable.
- (10) The Application Investigation and Permit Issuing or Denying Fee need not be submitted upon notice in writing by the permit issuing agency or shall be refunded when submitted with applications for modified or renewed permits if the following conditions exist:
 - (a) The modified or renewed permit is essentially the same as the previous permit.
 - (b) The source or sources included are in compliance with all conditions of the modified or renewed permit.
- (11) When an air contaminant source which is in compliance with the rules of a permit issuing agency relocates or proposes to relocate its operation to a site in the jurisdiction of another permit issuing agency having comparable control requirements, application may be made and approval may be given for an exemption of the Application Investigation and Permit Issuing or

Air Contaminant Discharge Permits (continued)

Denying Fee. The permit application and the request for such fee reduction shall be accompanied by (1) a copy of the permit issued for the previous location, and (2) certification that the permittee proposes to operate with the same equipment, at the same production rate, and under similar conditions at the new or proposed location. Certification by the agency previously having jurisdiction that the source was operated in compliance with all rules and regulations will be acceptable should the previous permit not indicate such compliance.

- (12) If a temporary or conditional permit is issued in accordance with adopted procedures, fees submitted with the application for an air contaminant discharge permit shall be retained and be applicable to the regular permit when it is granted or denied.
- (13) Sources required to obtain a permit under Section 20-033.08(2) not included in Table A shall be subject to, in addition to the Filing Fee of \$25.00, the following fee schedule to be applied in each case by the Department based upon the anticipated cost of issuing or denying the permit, and of compliance inspections:

<u>Schedule</u>	<u>Application Investigation and Permit Issuing or Denying Fee</u>	<u>Annual Permit Compliance Determination Fee</u>
if low cost	\$ 25.00	\$ 25.00
if medium cost	\$150.00	\$100.00
if high cost	\$450.00	\$325.00

As nearly as possible, applicable fees shall be consistent with sources of similar complexity as listed in Table A.

- (14) All fees shall be made payable to the permit issuing agency.

Air Contaminant Discharge Permits (continued)

- 20-033.14 PROCEDURES FOR OBTAINING PERMITS. Submission and processing of applications for permits and issuance, denial, modification, and revocation of permits shall be in accordance with duly adopted procedures of the permit issuing agency.
- 20-033.16 OTHER REQUIREMENTS. (1) No person shall construct, install, establish, modify or enlarge any air contaminant source listed in Table A or facilities for controlling, treating, or otherwise limiting air contaminant emissions from air contaminant sources listed in Table A without notifying the permit issuing agency as required by ORS 449.712 and rules promulgated thereunder.
- (2) Prior to construction, installation, establishment, modification or enlargement of any air contaminant source listed in Table A or facilities for controlling, treating, or otherwise limiting air contaminant emissions from air contaminant sources listed in Table A, detailed plans and specifications shall be submitted to and approved in writing by the Department or Regional Authority upon request as required by ORS 449.712 and rules promulgated thereunder.
- 20-033.18 REGISTRATION EXEMPTION. Air contaminant sources constructed and operated under a permit issued pursuant to these regulations may be exempted from registration as required by rules adopted pursuant to ORS 449.707.
- 20-033.20 PERMIT PROGRAMS FOR REGIONAL AIR POLLUTION AUTHORITIES. Subject to the provisions of this section 20-033.20, the Environmental Quality Commission authorizes each Regional Authority to issue air contaminant discharge permits for air contamination sources within its jurisdiction.
- (1) A Regional Authority's permit program, including proposed permits

and proposed revised permits, shall be submitted to the Environmental Quality Commission for review and approval prior to final adoption by the Regional Authority. Each permit issued by a Regional Authority shall by its conditions authorize the permittee to construct, install, modify or operate specified facilities, conduct specified activities, or emit, discharge or dispose of air contaminants in accordance with specified practices, limitations or prohibitions.

- (2) Each permit proposed to be issued or revised by a Regional Authority shall be submitted to the Department of Environmental Quality at least fourteen (14) days prior to the proposed issuance date. Within the fourteen (14) day period, the Department shall give written notice to the Regional Authority of any objection the Department has to the proposed permit or revised permit or its issuance. No permit shall be issued by a Regional Authority unless all objections thereto by the Department shall be resolved prior to its issuance. If the Department does not make any such objection, the proposed permit or revised permit may be issued by the Regional Authority.
- (3) If there is an objection by the Department regarding a proposed or revised permit, the Department shall present its objection before the Board of the Regional Authority in question prior to the issuance of a final permit.
- (4) If as a result of objection by the Department regarding a proposed or revised permit, the Regional Authority is unable to meet the time provisions of either this regulation or those contained in an existing permit, the Regional Authority shall issue a temporary permit for a period not to exceed ninety (90) days.

Air Contaminant Discharge Permits (continued)

- (5) The Regional Authority shall give written notice to the Department of its intention to deny an application for a permit, not to renew a permit, or to revoke or suspend any existing permit.
- (6) A copy of each permit issued or revised by a Regional Authority pursuant to this section shall be promptly submitted to the Department.

TABLE A - AIR CONTAMINANT SOURCES AND
ASSOCIATED FEE SCHEDULE

<u>Air Contaminant Source</u>	<u>Standard Industrial Classifica- tion Number</u>	<u>Application Investigation and Permit Issuing or Denying Fee</u>	<u>Annual Permit Compliance Determina- tion Fee</u>
1. Seed cleaning located in Special Control Areas (not elsewhere included)	0723	\$ 0	\$ 0
2. Minerals, earth and rock ground or otherwise treated	1442 3273 3295	100	75
3. Smoke houses with 5 or more employees	2013	75	50
4. Flour and other grain mill products in Special Control Areas	2041		
a. 10,000 or more T/yr.		250	150
b. Less than 10,000 T/yr.		50	50
5. Prepared feeds for animals and fowls in Special Control Areas.	2048		
a. 10,000 or more T/yr.		250	150
b. Less than 10,000 T/yr.		50	50
6. Cereal preparations in Special Control Areas.	2043	250	150
7. Blended and prepared flour in Special Control Areas.	2045		
a. 10,000 or more T/yr.		250	150
b. Less than 10,000 T/yr.		50	50
8. Beet sugar manufacturing	2063	150	100
9. Rendering plants	2077	150	100
10. Coffee roasting	2095	100	75
11. Sawmill and planing	2421		
a. 25,000 or more bd.ft./shift		75	50
b. Less than 25,000 bd.ft./shift		25	25

Table A (continued)

	<u>Air Contaminant Source</u>	<u>Standard Industrial Classifica- tion Number</u>	<u>Application Investigation and Permit Issuing or Denying Fee</u>	<u>Annual Permit Compliance Determina- tion Fee</u>
12.	Hardwood mills	2426	\$ 50	\$ 25
13.	Shake and shingle mills	2429	50	25
14.	Mill work with 10 employees or more	2431	75	50
15.	Plywood manufacturing	2435 2436	150	100
16.	Veneer manufacturing only (not elsewhere included)	2435 2436	75	75
17.	Wood preserving	2491	75	50
18.	Particleboard manufacturing	2492	300	150
20.	Hardboard manufacturing	2499	200	100
21.	Battery separator manufacturing	2499	75	50
22.	Furniture and fixtures	2511		
	a. 100 or more employees	2512	125	100
	b. 10 employees or more but less than 100 employees		75	50
23.	Sulfite pulp and paper production	2611 2621 2631	300	175
24.	Kraft pulp and paper production	2611 2621 2631	300	175
25.	Building paper and building board mills	2661	150	100
26.	Alkalies and chlorine manufacturing	2812	225	175
27.	Calcium carbide manufacturing	2819	225	150
28.	Nitric acid manufacturing	2819	100	75
29.	Ammonia manufacturing	2819	200	125
30.	Industrial inorganic and organic chemicals manufactur- ing (not elsewhere included)	2819	250	125

Table A (continued)

	<u>Air Contaminant Source</u>	<u>Standard Industrial Classification Number</u>	<u>Application Investigation and Permit Issuing or Denying Fee</u>	<u>Annual Permit Compliance Determination Fee</u>
31.	Synthetic resin manufacturing	2821	100	100
32.	Charcoal manufacturing	2861	200	100
33.	Herbicide manufacturing	2879	225	175
34.	Petroleum refining	2911 2992	450 100	325 75
35.	Asphalt production by distillation	2951	75	50
36.	Asphalt blowing plants	2951	100	75
37.	Asphaltic concrete paving plants	2951	100	100
38.	Asphalt felts and coating	2952	150	100
39.	Glass manufacturing	3231	100	75
40.	Cement manufacturing	3241	300	150
41.	Redimix concrete	3273	75	50
42.	Lime manufacturing	3274	150	100
43.	Gypsum products	3275	100	75
44.	Steel works, rolling and and finishing mills	3312	300	175
45.	Incinerators	3312		
	a. 2,000 lbs/hr. and greater capacity		100	100
	b. 40 lbs/hr. to 2,000 lbs/hr. capacity		75	50
46.	Primary smelting and refining of ferrous and nonferrous metals not elsewhere classified	3313 3339		
	a. 2,000 or more tons per year production		300	175
	b. Less than 2,000 tons per year production		100	75
47.	Gray iron and steel foundries	3321		
	a. 3,500 or more tons per year production	3322 3324	300	150
	b. Less than 3,500 tons per year production	3325	100	100

Table A (continued)

	<u>Air Contaminant Source</u>	<u>Standard Industrial Classifica tion Number</u>	<u>Application Investigation and Permit Issuing or Denying Fee</u>	<u>Annual Permit Compliance Determina- tion Fee</u>
48.	Primary aluminum production	3334	\$ 300	\$ 175
49.	Secondary lead smelting	3341	225	175
50.	Aluminum foundries (not elsewhere included)	3361	75	50
51.	Brass and bronze foundries	3362	75	50
52.	Electroplating, polishing and anodizing with 5 or more employees	3471	75	50
53.	Galvanizing and pipe coating --exclude all other activities	3479	75	50
54.	Battery manufacturing	3691	100	75
55.	Grain elevators - storage only located in Special Control Areas	4221		
	a. 20,000 or more T/yr.		150	100
	b. Less than 20,000 T/yr.		50	50
56.	Electric power generation	4911*	350	225
57.	Gas production and/or manufacturing	4925	350	225
58.	Fuel burning equipment	4961**		
	a. Residual oil			
	1) 250 million or more btu/hr. (heat input)		150	100
	2) 5 million or more but less than 250 million btu/hr. (heat input)		100	50
	3) Less than 5 million btu/hr. (heat input)		25	25
	b. Distillate oil			
	1) 250 million or more btu/hr. (heat input)		150	100
	2) 5 million or more but less than 250 million btu/hr. (heat input)		25	25

* Excluding hydroelectric and nuclear generating projects, and limited to utilities.

** Not limited to fuel burning equipment generating steam for sale but excluding power generation (SIC 4911)

Table A (continued)

<u>Air Contaminant Source</u>	<u>Standard Industrial Classification Number</u>	<u>Application Investigation and Permit Issuing or Denying Fee</u>	<u>Annual Permit Compliance Determination Fee</u>
c. Wood fired	4961		
1) 250 million or more btu/hr. (heat input)		\$ 150	\$ 100
2) 5 million or more but less than 250 million btu/hr. (heat input)		100	50
3) Less than 5 million btu/hr. (heat input)		25	25
d. Coal fired			
1) 250 million or more btu/hr. (heat input)		150	100
2) 5 million or more but less than 250 million btu/hr. (heat input)		100	50
3) Less than 5 million btu/hr. (heat input)		25	25
59. Grain elevators - primarily engaged in buying and/or marketing grain--in Special Control Areas.	5153		
a. 20,000 or more T/yr.		300	225
b. Less than 20,000 T/yr.		50	50

1/25/74

MINUTES OF THE FIFTY-THIRD MEETING
of the
Oregon Environmental Quality Commission
January 25, 1974

Public notice having been given to the news media, other interested persons and the Commission members as required by law, the fifty-third meeting of the Oregon Environmental Quality Commission was called to order by the Chairman at 9 a.m. on Friday, January 25, 1974, in the Second Floor Auditorium of the Public Service Building, 920 S. W. Sixth Avenue, Portland, Oregon.

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

The Department was represented by Director Diarmuid F. O'Scannlain; Deputy Director Ronald L. Myles; Assistant Directors Fred Bolton, Wayne Hanson, Harold L. Sawyer, Donald Mezirow, and Kenneth H. Spies; Regional Administrators E. J. Weathersbee, Verner Adkison, and Richard P. Reiter; staff members Pat H. Wicks, Robert D. Jackman, T. Jack Osborne, Dr. Robert L. Gay, Thomas Guilbert, Ray Johnson, M. J. Downs, Tom Bispham, Barbara J. Seymour and Ronald C. Householder; and Chief Counsel Ray P. Underwood.

MINUTES OF THE DECEMBER 17, 1973 COMMISSION MEETING

It was MOVED by Mr. Cogan, seconded by Dr. Crothers and carried that the minutes of the fifty-second meeting of the Commission, held in Eugene on December 17, 1973 be approved as prepared.

PROJECT PLANS FOR THE MONTH OF DECEMBER 1973

It was MOVED by Mr. Cogan, seconded by Dr. Phinney and carried that the actions taken by the Department during the month of December 1973, as reported by Mr. Myles, regarding the following 34 domestic sewerage, 7 industrial waste, 13 air quality control and 8 solid waste management projects be approved:

Water Quality Control

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-6-73	Clackamas County Sanitary Dist. I	C.O. #2 Sewage Treatment Plant Project & C.O. #2 Phase III, Schedule C	Approved

Municipal Projects - continued

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-6-73	Albany	Linn County Animal Shelter Sewer	Prov. app.
12-7-73	Portland	Change Order #6 Sewage Treatment Plant Project	Approved
12-10-73	East Salem Sanitary Dist. I	Chemeketa Community College Sewer	Prov. app.
12-10-73	Salem (Willow Lake)	16th & McGilchrist Sewers	Prov. app.
12-10-73	Aumsville	Del Mar No. 3 Subdivision Sewers	Prov. app.
12-12-73	Lincoln City	S.W. Harbor Ave. Phase 2 Sewers	Prov. app.
12-12-73	Canby	N. Cedar St. Sewers	Prov. app.
12-13-73	Oakridge	High School Sewer	Prov. app.
12-13-73	Hermiston	East Jennie Ave. Sewer	Prov. app.
12-13-73	Winston	Ronald St. Pump Station & Sewer	Prov. app.
12-13-73	Bly Sanitary Dist.	Addendum #4 to Sewage Treatment Plant Contract	Approved
12-13-73	Seaside	Change Order #5 Sewage Treatment Plant Contract	Approved
12-13-73	Oak Lodge S.D.	Change Order 1,2,3,4,5 & 6 Sewage Treatment Plant Contract	Approved
12-13-73	Depoe Bay S.D.	Addendum #1 Sewage Treatment Plant Contract	Approved
12-13-73	Astoria	Change Order #4 & 5, Schedule C Sewerage Construction	Approved
12-14-73	USA (Aloha)	Four Seasons #13 Sewers	Prov. app.
12-17-73	Wilsonville	Wilsonville Rd. Sewer	Prov. app.
12-17-73	Portland	Columbia Blvd. Sewage Treatment Plant - Outfall Project	Prov. app.
12-17-73	Coos Bay	Empire (#2) Sewage Treatment Plant Project - 1.62 MGD Second- ary Sewage Treatment & Disinfection	Prov. app.
12-20-73	USA (Sunset)	Weigel Apt. Sewer	Prov. app.
12-21-73	Gresham	Change Order #5 - Contract 2 - Sewage Treatment Plant Project	Approved
12-26-73	NTCSA	Effluent Polishing Units	Prov. app.
12-28-73	Bend	Canyon Park Subdivision Sewers	Prov. app.
12-28-73	Waldport	Sewer & Pumping Station for Forest Service	Prov. app.
12-28-73	Deschutes County	Entrata Lodge Sewers for Forest Use	Prov. app.
12-31-73	Oakridge	Rose St. Sewer	Prov. app.

Industrial Projects (7)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-6-73	Brownsville	Cecil E. Jantz Hog Farm animal waste facilities	Prov. app.
12-13-73	Salem	Portland General Electric Company, revised oil pollution program	Prov. app.
12-17-73	Sitkum	Kenneth Laird Dairy, animal waste facilities	Prov. app.
12-17-73	Dayton	Gary Owens Hog Farm, animal waste facilities	Prov. app.

Industrial Projects - continued

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-17-73	Myrtle Point	Bearl Seals Dairy, animal waste facilities	Prov. app.
12-27-73	Portland	Ash Grove Cement Company, waste treatment facilities	Prov. app.
12-27-73	Central Point	Victor F. Birdseye Dairy, animal waste facilities	Prov. app.

Air Quality Control

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-4-73	Lane	International Kings Table 85-space parking facility	Approved with conditions
12-5-73	Lane	Eugene Hospital and Clinic 72-space parking facility	Approved with conditions
12-6-73	Multnomah	Liberty House/Jantzen Beach Center, 313-space parking facility	Approved with conditions
12-11-73	Linn	Western Kraft Corporation Plans and specifications for installation of an alternate non-condensable gas incineration system	Approved
12-12-73	Union	Albertson's Store No. 135, La Grande, installation of paper waste incinerator	Approved
12-13-73	Washington	Summerfield Planned Unit Development, 125-space parking facility for community recreation center	Approved
12-17-73	Klamath	Weyerhaeuser Co., Klamath Falls installation of cyclones and baghouse filter	Approved
12-20-73	Washington	St. Vincent Hospital 738-space parking facility	Conceptual approval
12-21-73	Lane	Fred Meyer Shopping Center 567-space parking facility	Approved with conditions
12-24-73	Washington	Koll Business Center 662-space parking facility	Req. add. info.
12-26-73	Lane	Weyerhaeuser Company 164-space parking facility	Approved with conditions
12-27-73	Multnomah	Benj. Franklin Savings & Loan 100-space temporary parking facility	Req. add. info.
12-27-73	Multnomah	Greenway Apartments 864-space parking facility	Req. add. info.

Solid Waste Management

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-7-73	Linn	Roche Road - Existing Demolition Site - Operational Plan	Approved
12-7-73	Multnomah	Penwalt Corp. - Existing IW Landfill - Operational Plan	Prov. app.

Solid Waste Management - continued

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-7-73	Crook	Crook Co. Landfill - Existing Garbage Landfill - Operational Plan	Approved
12-13-73	Benton	Coffin Butte - Existing Garbage Landfill - Operational and Closure Plan	Approved
12-13-73	Lane	Five Rivers Landfill - Existing Garbage Site - Operational Plan	Prov. app.
12-14-73	Lincoln	Clarks Sludge Disposal Site - New Septic Tank Disposal - Operational Plan	Approved
12-21-73	Linn	Willamette Industries Chateau Landfill - Existing Industrial Site - Operational Plan	Prov. app.
12-26-73	Lane	Day Island - Existing Garbage Landfill - Closure Plan	Approved

STATEMENT BY MR. COGAN

Mr. Cogan announced that effective February 1, 1974, he will become Director of the new Land Conservation and Development Commission and, consequently, after that date will not be able to continue to serve as a member of the EQC. He said he was really pleased that he had the opportunity to be an EQC member during the past few years and to contribute to the many achievements which had taken place. He admitted that he would miss the excitement of participating in the Commission meetings.

Chairman McPhillips and Dr. Crothers both commended Mr. Cogan very highly for his contribution to the Commission and the people of Oregon and expressed the regrets of the Commission that he must resign as a member. They wished him well in his new position.

DEPARTMENTAL REORGANIZATION - STATUS REPORT

Mr. O'Scannlain reported that at its last meeting the State Emergency Board had approved the reorganization plan for DEQ effective February 1, 1974. He then introduced the assistant directors whom he had appointed to head up the five major programs. They are Wayne Hanson for Air Quality, Harold L. Sawyer for Water Quality, Kenneth H. Spies for Land Quality, Fred M. Bolton for Enforcement, and Donald L. Mezirow for Administration. Next he introduced the regional administrators who are E. Jack Weathersbee for the Northwest Region, Verner Adkison for the Midwest Region and Richard P. Reiter for the Southwest Region. Administrators for the Central and Eastern Regions will be appointed later.

NEW INDUSTRIAL DEVELOPMENTS

Dr. Crothers stated that in connection with certain new industrial development proposals, he believed it would be most beneficial if the staff could inspect existing installations in other states in order to get first-hand information regarding the effectiveness of proposed environmental controls.

It was then MOVED by Dr. Crothers, seconded by the Chairman and unanimously carried that the Director be instructed to institute a rule requiring, where appropriate, any company proposing to install a new industrial process or development in Oregon to provide means for the DEQ staff to inspect existing installations in other areas.

TAX CREDIT APPLICATIONS

Mr. Sawyer reviewed briefly the Department's evaluation of the four tax credit applications covered by the following motion: It was MOVED by Dr. Phinney, seconded by Mrs. Hallock and unanimously carried that, as recommended by the Director, tax credit certificates be issued to the applicants for the pollution control facilities described in the following applications and bearing the costs as listed with 80 percent or more of the cost in each case being allocated to pollution control:

<u>App. No.</u>	<u>Applicant</u>	<u>Claimed Cost</u>
T-496	Georgia-Pacific Corp., Eugene, Springfield	\$ 31,233.98
T-498	Georgia-Pacific Corp., Eugene, Springfield	4,914.89
T-525	Brooks-Willamette Corp., Bend	114,460.46
T-526	Brooks-Willamette Corp., Bend	27,009.68

REPORT ON TUSSOCK MOTH MONITORING PROPOSAL

Dr. Gay presented a brief report on the status of the proposed monitoring program in connection with the requested use of DDT for control of the Tussock Moth infestation in the forests of Northeast Oregon and Southeast Washington. The proposed monitoring program has been developed by an ad hoc Task Force which was created primarily through the efforts of Dr. Warren C. Westgarth. The Task Force includes representatives of some 10 state and federal agencies in Oregon and Washington, plus certain environmental interests. A request for allocation of state funds to finance part of the program had been submitted to the State Emergency Board which at its meeting in January, referred the matter to the 1974 Special Session of the Oregon Legislature.

ALKALI LAKE WASTE DISPOSAL SITE

Mr. Wicks presented for the Department a detailed report dated January 14, 1974, covering the background, factual analysis, conclusions, and recommendations concerning the environmental hazards caused by the failure of Chemical Waste Storage and Disposition, Inc. (Chem-Waste) to dispose of in a proper manner some 25,000 55-gallon drums of pesticide manufacturing wastes at the company's Alkali Lake disposal site located in Lake County, approximately 55 miles north-northeast of the city of Lakeview.

He stated that the court opinion resulting from the trial of the Department's suit in the Washington County Circuit Court against Chem-Waste was not favorable to the Department's objective of implementing proper resolution of the Alkali Lake situation.

He said that based on the Department's findings in this matter, it is the recommendation of the Director that the Commission declare the present condition at the Alkali Lake site an emergency and that the Department be authorized and directed to:

1. Institute proceedings immediately to condemn the Alkali Lake site on behalf of the Commission.
2. As soon as possible, request legislative approval for use of \$385,000 in pollution control bond funds to acquire the Alkali Lake site and dispose of the stored pesticide residues.
3. Request Rhodia, Inc. Chipman Division to pledge whatever funds it can to offset disposal costs incurred by the State.
4. Proceed with disposal operations as soon as possible after condemnation has been completed and legislative approval for commitment of funds has been received.
5. Appeal the Circuit Court opinion on the Department's suit against Chem-Waste to the State Court of Appeals as a contingency measure.

Mr. McPhillips said he is appalled at this situation and expressed the opinion that there should be some way to recover the assets of the corporation to finance proper disposal of the pesticide wastes.

Mrs. Hallock asked if this site could be operated as a permanent environmentally hazardous waste disposal site and whether or not consideration had been given to state versus private operation. Mr. Wicks replied that the site is suitable for disposal of other hazardous wastes and in the long run might be utilized for that purpose. He also stated that in the past consideration had been given by the Commission to state versus private operation and that preference had been given the latter. In addition, he mentioned that the application

of the Chem-Nuclear Corp. for a license to operate a site near Arlington is still under consideration and might possibly be acted on at the March Commission meeting if the special financial committee completes its investigation and report in time.

Mr. Cogan said he was at a loss to understand the court's opinion in this matter. He also said he is opposed to using public funds to solve this problem and that he thinks an attempt should be made to get the Rhodia Corp. to pay the bill for disposing of the wastes.

Mr. Underwood said he believes it would be possible to "pierce the corporate veil" and thereby force Chem-Waste to finance the cost of waste disposal.

After further discussion, it was MOVED by Dr. Crothers, seconded by Mr. Cogan and carried that the Director's recommendations in this matter be amended by striking from item no. 5 the words "as a contingency measure" and by adding a new item no. 6 to read, "Have the legal staff investigate all possible means of recovering the costs of waste disposal from Chem-Waste."

It was then MOVED by Dr. Crothers, seconded by Mr. Cogan and unanimously carried that with the above amendments the Director's recommendations in this matter be adopted and approved.

Mr. George Ward, consulting engineer, was present and commented on the possibility of disposing of solid wastes by using them to help stabilize the sand dunes located within the Navy bombing range near Boardman in Central Oregon.

ADOPTION OF TEMPORARY RULES FOR SUBSURFACE SEWAGE DISPOSAL

Mr. Jackman presented the staff report dated January 15, 1974 regarding the temporary rules for subsurface sewage disposal being proposed for adoption at this meeting. With the passage of Senate Bill 77 by the 1973 Legislature (Chapter 835, Oregon Laws 1973), the jurisdiction of the State Health Division over subsurface sewage disposal was terminated effective October 5, 1973. Prior to that date, temporary rules had been adopted by the EQC to govern the installation of subsurface sewage disposal systems until full responsibility could be assumed by DEQ on January 1, 1974.

In the meantime, detailed proposed rules were drafted by DEQ and submitted to the general public for full review and comment at 17 public hearings sessions in 10 cities in late November and December, 1973. At a final public hearing

before the Commission in Eugene on December 17, 1973, it was decided that in view of the extensive testimony received, several changes needed to be made in the proposed rules before they could be adopted.

Accordingly, the staff proceeded immediately to draft the necessary changes and beginning on January 3, 1974, some 4,000 copies of the revised proposal were distributed to all interested parties for their information.

Mr. Jackman outlined briefly the major changes which had been made since the December 17, 1973 hearing. The revised proposal to be considered at this January 25, 1974 Commission meeting was comprised of:

1. red-covered document dated January, 1974;
2. errata sheet inserted therein; and
3. substituted language for "Procedure for Disposal System Abandonment," Section III, subsection I on pages 18 and 19 of the red-covered document.

He said it was the Director's recommendation that these proposed rules be adopted, effective immediately upon filing with the Secretary of State, and further that the Commission authorize him to establish a land sewage task force comprised of knowledgeable individuals from throughout the State of Oregon to review these rules during 1974 and to recommend further changes effective January 1, 1975, which shall take into account such factors as regional differences in climate, soil and ground water conditions, alternative sewage systems, and systems specifications and materials requirements.

A report by Hearings Officer Thomas Guilbert of the testimony presented at the 17 public hearings was included as a part of the staff report for the information of the Commission members.

Three letters of comment which had been received subsequent to the distribution of the 4,000 copies of the revised proposed rules were entered into the record of this meeting by Mr. Jackman. They were from Robert Manseth of Route 1, Box 654, Florence and dated January 23, 1974; from Jim Christopherson, 489 Hamilton Road, Jacksonville and dated January 21, 1974; and from Fred VanNatta, Oregon State Home Builders Association, Salem and dated January 22, 1974.

Another letter from Henry Richmond, III, staff attorney for OSPIRG, expressed concern about the impact of the rules on development of prime farm lands.

Chairman McPhillips announced that the public hearing in this matter had been closed but that several persons who were present at this meeting had asked to make additional statements. He said they would be permitted to speak but asked that they limit their remarks to five minutes each.

Mr. Donald Kemp, contractor and subdivider, 301 Dibblee Lane, Eugene, was the first witness and said he objected to the requirements pertaining to redundant systems and to ground water level. He asked that the former rules of the Health Division be used for previously planned developments.

Mr. William Briott of the Home Builders Association of Eugene-Springfield, 59 Coburg Road, Eugene, said there are numerous lots in that area which were previously approved by the Lane County Health Department and which have very good soil and drainage conditions but which are only 8,000 to 9,000 square feet in area and therefore are not large enough for even redundant systems. He asked that some concession be made so that these lots can be developed as planned.

Mr. V. W. Shearer of the Oregon Mobile Park Association, 3615 N. E. Van Buren, Corvallis, objected to the flow requirements for design of subsurface systems for mobile home parks.

Mr. George Ward, consulting engineer of Portland, suggested that a federal grant be sought to finance research and development studies of subsurface sewage disposal. He said the rules should stress preventive maintenance.

Mr. Marvin Hanson, Northeast Portland builder, objected to the definition of "available sewers," claiming that no consideration was given to the economic impact. He requested that the old rules that were in effect prior to January 1, 1972 be adopted in place of those now being considered.

Mr. J. M. Allison, President of the Oregon Landowners Association, Route 3, Sherwood, asked that it be clarified as to whether or not the rules to be adopted at this meeting would be temporary or permanent. Mr. Underwood explained that since they must become effective immediately, it was necessary that they be adopted as temporary rules.

Mr. Chris M. Hesse of 5743 N. E. 105th Avenue, Portland, objected to the proposed rules as being too strict.

Mr. Tom Guilbert, Hearings Officer, commented on the points which had been raised by the above persons.

The meeting was then recessed at noon and reconvened at 1:40 p.m.

Following the luncheon recess, Mr. Jack Osborne explained the significance and meaning of the requirement that the water table not be less than six feet below the natural ground surface.

It was suggested by Mr. O'Scannlain that the original item no. 6 on page 31 be restored and that the succeeding sections be renumbered. Item no. 6 reads as follows: "An area where an accumulation of surface water will occur for a period of two (2) consecutive weeks or longer."

After further discussion it was MOVED by Dr. Phinney, seconded by Mrs. Hallock and unanimously carried that including the above suggestion by Mr. O'Scannlain, the proposed revised rules as submitted by Mr. Jackman be adopted to become effective immediately upon filing with the Secretary of State.

OREGON STEEL MILLS--COMPLIANCE SCHEDULE MODIFICATION

Proper notice having been given as required by statute and administrative rules, the public hearing in the matter of the request of the Oregon Steel Mills for a change in its compliance schedule for the plant located at 5200 N. W. Front Avenue, Portland, was called to order by the Chairman with all Commission members being present.

Mr. Bispham presented the staff report dated January 8, 1974 regarding this matter. He said it is the recommendation of the Director that the company's request for compliance schedule modification be granted and an order be adopted granting this modification under the following conditions:

1. The operation of the Front Avenue electric arc furnaces identified as "A" furnace and "B" furnace shall be terminated on or before December 31, 1974. In the event Oregon Steel Mills sells or otherwise transfers ownership or control of said property and equipment, Oregon Steel Mills shall advise the new owner or lessee of the December 31, 1974 shut down requirement and that any future operation of the existing electric arc furnaces (A and B) beyond the date of December 31, 1974, shall only be conducted after adequate control equipment has been approved by the Department and installed.
2. Oregon Steel Mills shall operate A and B furnaces simultaneously only in the event of mandatory CRA furnace shut down in which case Oregon Steel Mills shall immediately inform the Department of the circumstances and expected length of time A and B furnaces will be operating simultaneously.

3. Every effort shall be made by the company to conduct and maintain the Front Avenue melting operations at the lowest practicable levels of emission and shall utilize pellets and clean scrap to the maximum extent possible.
4. Oregon Steel Mills shall submit to the Department by not later than October 1, 1974, a written report confirming progress towards compliance of the Front Avenue plant by December 31, 1974.

Mr. Robert Neumeister was present to represent the company and to explain their plans for future operations.

No other persons asked to be heard in this matter.

It was MOVED by Mr. Cogan, seconded by Dr. Phinney and unanimously carried that the Director's recommendations be approved.

APPROVAL OF VARIANCES GRANTED BY LRAPA

Mr. Ray Johnson presented the staff reports, both dated January 8, 1974, regarding the variances granted by the Lane Regional Air Pollution Authority (LRAPA) to the (1) Bohemia Incorporated Cascade Fiber Company, Eugene, and (2) Weyerhaeuser Company, Springfield.

It was MOVED by Mr. Cogan, seconded by Mrs. Hallock and unanimously carried that, as recommended by the Director, LRAPA Variance No. 73-2 granted to Cascade Fiber Company be approved as submitted.

It was MOVED by Mr. Cogan, seconded by Mrs. Hallock and unanimously carried that, as recommended by the Director, LRAPA Variance No. 73-1 granted to Weyerhaeuser Company be approved as submitted.

BENJAMIN FRANKLIN PARKING FACILITIES

Mr. Downs presented the Department's report, evaluation and recommendations regarding the application from Benj. Franklin Savings & Loan Association for permission to construct a 100-space parking facility in downtown Portland. The location is the block bounded by S. W. Fourth Avenue, S. W. Mill Street, S. W. Fifth Avenue, and S. W. Market Street.

He said the proposed facility had been approved by the Portland Planning Commission prior to the city's adoption of any guidelines. The Planning Commission has since adopted an interim policy but the City Council has not yet acted on a parking plan.

He said further that the proposed parking facility does not meet all of the criteria contained in Section 5 of the Portland Transportation Control Strategy and that consequently its overall effect will be to encourage commuters to use their automobiles rather than seek alternative modes of transportation.

The Director's recommendation was therefore that an order be entered denying the December 20, 1973 application of Benj. Franklin Savings & Loan Association for the 100-space parking facility.

Mr. Robert E. Downie, Senior Vice President and Treasurer, was present to represent the applicant. He said they want to use this site for parking only until the downtown plan is developed so they will know what kind of permanent development to make.

Mr. Doug Goodman of City Center Parking (CCP) was also present and pointed out over 450 parking spaces have been lost in that portion of downtown Portland-- 228 at Pacific Northwest Bell and 225 on-street meter spaces. He said his company planned to operate the Benj. Franklin facility and then submitted an alternative proposal which was to reserve 51 of the 100 spaces for monthly carpool customers and use only 49 spaces for daily customers. A reduced or incentive rate would be charged the carpool customers to encourage such use and ultimately more spaces would also be devoted to such use. He said further that if approved, this would be the first carpool lot in the city.

After further discussion it was MOVED by Dr. Crothers, seconded by Mrs. Hallock and carried that the application be approved on the basis of use proposed by City Center Parking.

Because of a conflict of interest Mr. Cogan did not vote on the motion. He did, however, criticize severely the City Planning Commission for having approved the proposed parking facility without benefit of adequate guidelines and the Portland City Council for having procrastinated so long in adopting a downtown parking plan.

PUBLIC HEARING FOR ADOPTION OF MOTOR VEHICLE POLLUTION CONTROL CRITERIA

Proper notice having been given as required by statute and administrative rules, the public hearing in the matter of adoption of proposed criteria for certification of motor vehicle pollution control systems was called to order by the Chairman at 3 p.m. on January 25, 1974 in the Second Floor Auditorium

of the Public Service Building, 920 S. W. Sixth Avenue, Portland, Oregon. All Commission members were present.

Mr. Householder presented the staff report dated January 16, 1974 and reviewed briefly the proposed criteria.

Mr. Lloyd Shannon of Northwest Natural Gas Company testified in support of the criteria.

No other persons asked to testify.

It was MOVED by Dr. Crothers, seconded by Dr. Phinney and unanimously carried that pursuant to ORS 449.953, the following criteria for certification of motor vehicle pollution control systems be adopted:

24-2004 Criteria for Certification of Motor Vehicle Pollution Control System

Pursuant to the requirements of ORS 449.953(1), the following are the criteria for certification of motor vehicle pollution control systems as defined by ORS 449.949.

(1) A motor vehicle pollution control system which necessitates equipment designed for installation on a motor vehicle for the purpose of reducing the pollutants emitted from the vehicle shall not be certified.

(2) A motor vehicle pollution control system which necessitates modifications, other than adjustments, to the original design of the motor vehicle shall not be certified.

The hearing was adjourned at 3:15 p.m.

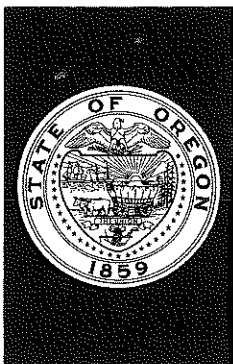
FOSTER-MIDWAY (SWEET HOM AREA) HEALTH HAZARD ANNEXATION

Mr. Sawyer presented the Department's report and Director's recommendation regarding this matter.

It was MOVED by Mr. Cogan, seconded by Dr. Phinney and carried that as recommended by the Director, the sewerage system proposal submitted by the City of Sweet Home for serving the Foster-Midway area be approved and that said approval be certified to the State Health Division.

There being no further business the meeting was adjourned at 3:25 p.m.

The next meeting is scheduled for February 22, 1974 in Corvallis.



ENVIRONMENTAL QUALITY COMMISSION

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MORRIS K. CROTHERS
Salem

ARNOLD M. COGAN
Portland

DIARMUID F. O'SCANNLAIN
Director

MEMORANDUM

To : Environmental Quality Commission
From : Director
Subject: Agenda Item No. B, January 25, 1974 EQC Meeting
December 1973 Activity Report

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

Water Quality Control

1. Thirty-four (34) domestic sewage projects were reviewed:
 - a. Provisional approval was given to:
 - 16 plans for sewer extensions
 - 3 plans for sewage treatment works improvements
 - b. Approval without conditions was given to:
 - 15 Change Orders and Addenda for sewage treatment plant projects
2. Seven (7) industrial waste treatment plans were reviewed:
 - a. Provisional approval was given to:
 - 2 miscellaneous projects
 - 1) Portland General Electric Company, Salem
(revised oil pollution program)
 - 2) Ash Grove Cement Company, Portland
(waste treatment facilities)
 - 5 animal waste facilities
 - 1) Cecil E. Jantz Hog Farm, Brownsville
 - 2) Kenneth Laird Dairy, Sitkum
 - 3) Gary Owens Hog Farm
 - 4) Bearl Seals Dairy, Myrtle Point
 - 5) Victor F. Birdseye Dairy, Central Point

Air Quality Control

1. Thirteen (13) project plans or proposals were reviewed:
 - a. Approval was given to:
 - 1 parking space facility
 - 1) Summerfield Planned Unit Development, Washington County
(125-space parking facility for community recreation center)



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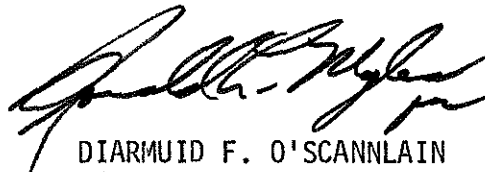
- 3 miscellaneous projects
 - 1) Western Kraft Corporation, Linn County
(plans and specifications for installation of an alternate non-condensable gas incineration system)
 - 2) Albertson's Store No. 135 La Grande, Union County
(installation of paper waste incinerator)
 - 3) Weyerhaeuser Company, Klamath Falls, Klamath County
(installation of cyclones and baghouse filter)
- b. Conditional approval was given to:
 - 5 parking space facilities
 - 1) International Kings Table, Lane County
(85-space parking facility)
 - 2) Eugene Hospital and Clinic, Lane County
(72-space parking facility)
 - 3) Liberty House/Jantzen Beach Center, Multnomah County
(313-space parking facility)
 - 4) Fred Meyer Shopping Center, Lane County
(567-space parking facility)
 - 5) Weyerhaeuser Company, Lane County
(164-space parking facility)
- c. Additional information was requested from:
 - 3 parking space facilities
 - 1) Koll Business Center, Washington County
(662-space parking facility)
 - 2) Benjamin Franklin Savings & Loan, Multnomah County
(100-space temporary parking facility)
 - 3) Greenway Apartments, Multnomah County
(864-space parking facility)
- d. Conceptual approval was given to:
 - 1 parking space facility
 - 1) St. Vincent Hospital, Washington County
(738-space parking facility)

Solid Waste Disposal

- 1. Eight (8) project plans were reviewed:
 - a. Approval was given to:
 - 5 miscellaneous projects
 - 1) Roche Road, Linn County
(Existing Demolition Site - Operational Plan)
 - 2) Crook County Landfill, Crook County
(Existing Garbage Landfill - Operational Plan)
 - 3) Coffin Butte, Benton County
(Existing Garbage Landfill - Operational and Closure Plan)
 - 4) Clarks Sludge Disposal Site, Lincoln County
(New Septic Tank Disposal - Operational Plan)
 - 5) Day Island, Lane County
(Existing Garbage Landfill - Closure Plan)
 - b. Conditional approval was given to:
 - 3 miscellaneous projects
 - 1) Penwalt Corp., Multnomah County
(Existing IW Landfill - Operational Plan)
 - 2) Five Rivers Landfill, Lane County
(Existing Garbage Site - Operational Plan)
 - 3) Willamette Industries Chateau, Linn County
(Existing Industrial Site - Operational Plan)

Director's Recommendation

It is recommended that the Commission give its confirming approval to staff action on project plans for the month of December 1973.



DIARMUID F. O'SCANNLAIN
Director

attachments

ss: 1/15/74

PROJECT PLANS

Water Quality Division

During the Month of December, 1973, the following project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending ratification by the Environmental Quality Commission.

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
<u>Municipal Projects (34)</u>			
12-6-73	Clackamas County Sanitary Dist. I	C.O. #2 Sewage Treatment Plant Project & C.O. #2 Phase III, Schedule C	Approved
12-6-73	Albany	Linn County Animal Shelter Sewer	Prov. approval
12-7-73	Portland	Change Order #6 Sewage Treatment Plant Project	Approved
12-10-73	East Salem Sanitary Dist. I	Chemeketa Community College Sewer	Prov. approval
12-10-73	Salem (Willow Lake)	16th & McGilchrist Sewers	Prov. approval
12-10-73	Aumsville	Del Mar No. 3 Subdivision Sewers	Prov. approval
12-12-73	Lincoln City	S. W. Harbor Ave. Phase 2 Sewers	Prov. approval
12-12-73	Canby	N. Cedar St. Sewers	Prov. approval
12-13-73	Oakridge	High School Sewer	Prov. approval
12-13-73	Hermiston	East Jennie Ave. Sewer	Prov. approval
12-13-73	Winston	Ronald St. Pump Station & Sewer	Prov. approval
12-13-73	Bly Sanitary Dist.	Addendum #4 to Sewage Treatment Plant Contract	Approved
12-13-73	Seaside	Change Order #5 Sewage Treatment Plant Contract	Approved
12-13-73	Oak Lodge S.D.	Change Order 1,2,3,4,5 & 6 Sewage Treatment Plant Contract	Approved
12-13-73	Depoe Bay S.D.	Addendum #1 Sewage Treatment Plant Contract	Approved
12-13-73	Astoria	Change Order #4 & 5, Schedule C Sewerage Construction	Approved
12-14-73	USA (Aloha)	Four Seasons #13 Sewers	Prov. approval

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12-17-73	Wilsonville	Wilsonville Rd. Sewer	Prov. approval
12-17-73	Portland	Columbia Blvd. Sewage Treatment Plant - Outfall Project	Prov. approval
12-17-73	Coos Bay	Empire (#2) Sewage Treatment Plant Project - 1.62 MGD Secondary Sewage Treatment & Disinfection.	Prov. approval
12-20-73	USA (Sunset)	Weigel Apt. Sewer	Prov. approval
12-21-73	Gresham	Change Order #5 - Contract 2 - Sewage Treatment Plant Project	Approved
12-26-73	NTCSA	Effluent Polishing Units	Prov. approval
12-28-73	Bend	Canyon Park Subdivision Sewers	Prov. approval
12-28-73	Waldport	Sewer & Pumping Station for Forest Service	Prov. approval
12-28-73	Deschutes County	Entrata Lodge Sewers for Forest Use	Prov. approval
12-31-73	Oakridge	Rose St. Sewer	Prov. approval

Water Quality Division

Industrial Projects (7)

<u>Date</u>	<u>Location</u>	<u>Project</u>	<u>Action</u>
12/6/73	Brownsville	Cecil E. Jantz Hog Farm, animal waste facilities	Prov. Approval
12/13/73	Salem	Portland General Electric Company, revised oil pollution program	Prov. Approval
12/17/73	Sitkum	Kenneth Laird Dairy, animal waste facilities	Prov. Approval
12/17/73	Dayton	Gary Owens Hog Farm, animal waste facilities	Prov. Approval
12/17/73	Myrtle Point	Bearl Seals Dairy, animal waste facilities	Prov. Approval
12/27/73	Portland	Ash Grove Cement Company, waste treatment facilities	Prov. Approval
12/27/73	Central Point	Victor F. Birdseye Dairy, animal waste facilities	Prov. Approval

AP-7 PROJECT PLANS, REPORTS, PROPOSALS FOR AIR QUALITY CONTROL
DIVISION FOR DECEMBER, 1973

<u>DATE</u>	<u>LOCATION</u>	<u>PROJECT</u>	<u>ACTION</u>
4	Lane	<u>International Kings Table</u> 85-space parking facility	Approved with conditions
5	Lane	<u>Eugene Hospital and Clinic</u> 72-space parking facility	Approved with conditions
6	Multnomah	<u>Liberty House/Jantzen Beach Center</u> 313-space parking facility	Approved with conditions
11	Linn	<u>Western Kraft Corporation</u> Plans and specifications for installation of an alternate non-condensable gas incineration system.	Approved
12	Union	<u>Albertson's Store No. 135</u> <u>LaGrande</u> Installation of paper waste incinerator	Approved
13	Washington	<u>Summerfield Planned Unit Development</u> 125-space parking facility for community recreation center	Approved
17	Klamath	<u>Weyerhaeuser Co., Klamath Falls</u> Installation of cyclones and baghouse filter	Approved
20	Washington	<u>St. Vincent Hospital</u> 738-space parking facility	Conceptual approval
21	Lane	<u>Fred Meyer Shopping Center</u> 567-space parking facility	Approved with conditions
24	Washington	<u>Koll Business Center</u> 662-space parking facility	Requested additional information
26	Lane	<u>Weyerhaeuser Company</u> 164-space parking facility	Approved with conditions
27	Multnomah	<u>Benj. Franklin Savings & Loan</u> 100 space temporary parking facility	Requested additional information
27	Multnomah	<u>Greenway Apartments</u> 864-space parking facility	Requested additional information

PROJECT PLANS
SOLID WASTE MANAGEMENT DIVISION

During the month of December 1973, the following project plans and specifications and/or reports were reviewed by the staff. The disposition of each project is shown, pending confirmation by the Environmental Quality Commission.

<u>DATE</u>	<u>LOCATION</u>	<u>PROJECT</u>	<u>ACTION</u>
7	Linn Co.	Roche Road - Existing Demolition Site - Operational Plan	Approved
7	Multnomah Co.	Penwalt Corp. - Existing IW Landfill - Operational Plan	Prov. Approval
7	Crook Co.	Crook Co. Landfill - Existing Garbage Landfill - Operational Plan	Approved
13	Benton Co.	Coffin Butte Existing Garbage Landfill Operational & Closure Plan	Approved
13	Lane Co.	Five Rivers Landfill Existing Garbage Site Operational Plan	Prov. Approval
14	Lincoln Co.	Clarks Sludge Disposal Site New Septic Tank Disposal Operational Plan	Approved
21	Linn Co.	Willamette Industries Chateau Landfill - Existing Industrial Site Operational Plan	Prov. Approval
26	Lane Co.	Day Island - Existing Garbage Landfill - Closure Plan	Approved



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Portland

To: Environmental Quality Commission

From: Director

Subject: Agenda Item D, January 25, 1974, EQC Meeting

TAX CREDIT APPLICATIONS

DIARMUID F. O'SCANNLAIN
Director

Attached are review reports on four (4) Tax Credit Applications. These applications and the recommendations of the Director are summarized on the attached table.



DIARMUID F. O'SCANNLAIN

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Attachment: Tax Credit Application Summary
Tax Credit Review Reports (4)

1-14-74

Georgia-Pacific Corporation, T-496
Georgia-Pacific Corporation, T-498
Brooks-Willamette Corporation, T-525
Brooks-Willamette Corporation, T-526



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TAX CREDIT APPLICATIONS

<u>Applicant</u>	<u>Appl. No.</u>	<u>Facility</u>	<u>Claimed Cost</u>	<u>% Allocable to Pollution Control</u>	<u>Director's Recommendation</u>
Georgia-Pacific Corporation Eugene/Springfield Division	T-496	Three separate wastewater recycling systems	\$31,233.98	80% or more	Issue
Georgia-Pacific Corporation Eugene-Springfield Division	T-498	Glue wastewater recirculation system	4,914.89	80% or more	Issue
Brooks-Willamette Corporation Bend Division	T-525	Particulate emission control system	114,460.46	80% or more	Issue
Brooks-Willamette Corporation Bend Division	T-526	Sanderdust emission control system	27,009.68	80% or more	Issue

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

1. Applicant

Georgia-Pacific Corporation
Eugene/Springfield Division
P.O. Box 789
Eugene, Oregon 97401

The applicant owns and operates a plywood plant at Prairie Road near Eugene, Oregon in Lane County.

2. Description of Claimed Facility

The claimed facility consists of 3 separate wastewater recycling systems: 1) Dryer washdown water recirculation system, and 2) 2 glue wastewater recirculation systems, one for the protein (or blood-type) glue and one for ureaformaldehyde glue. Each recirculation system consists of a wastewater collection system, holding tanks, screens, and related pumps, piping, and controls.

The claimed facility was placed in operation in July, 1971. Certification is claimed under the 1969 Act with 100% allocated to pollution control.

Facility cost: \$31,233.98 (Accountant's certification was submitted).

3. Evaluation of Application

Prior to the construction of the facility, glue wastewaters and veneer dryer washdown waters were discharged to public waters. With the claimed facility, the glue wastewaters are collected and reused in the making of fresh glue. The dryer washdown waters are collected, screened, and reused as washdown. Investigation reveals that the facilities were designed, constructed, operated, and maintained quite well.

It is concluded that this facility was installed for pollution control.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$31,233.98 with 80% or more of the cost allocated to pollution control be issued for the facilities claimed in Tax Application No. T-496.

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

1. Applicant

Georgia-Pacific Corporation
Eugene/Springfield Division
P.O. Box 789
Eugene, Oregon 97401

The applicant owns and operates a prefinished plywood paneling lay-up plant south of Junction City, Oregon in Lane County.

2. Description of Claimed Facility

The facility is a glue wastewater recirculation system consisting of a concrete settling pit, vibrating screen, two 400 gallon holding tanks, 8,000 gallon storage tank, pressure tank, and related pumps, piping and controls.

The claimed facility was placed in operation in November, 1970. Certification is claimed under the 1969 Act with 100% allocated to pollution control.

Facility cost: \$4,914.89 (Accountant's certification was submitted)

3. Evaluation of Application

Prior to the construction of the claimed facilities, glue wastewaters were discharged to a roadside ditch. With the claimed facility, the glue wastewaters are collected and reused for washdown and for making new glue. Investigation reveals a well-designed, well-constructed, and well-operated system.

It is concluded that this facility was installed for pollution control.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$4,914.89 with 80% or more of the cost allocated to pollution control be issued for the facilities claimed in Tax Application No. T-498.

Date January 10, 1974

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

1. Applicant

Brooks-Willamette Corporation
Bend Division
P. O. Box 1245
Bend, Oregon 97701

The applicant operates a particleboard manufacturing plant in Bend, Deschutes County, Oregon.

2. Description of Facility

The facility claimed in this application controls particulate emissions to the atmosphere from two (2) of the plant's Heil particle dryers and is described to consist of the following:

1. Two (2) Type R American Air Filter wet centrifugal scrubbers.
2. One (1) Eimco vaccum filter.
3. Collection and handling ducts.
4. Necessary fans, foundations, motors, and electrical controls.

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

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

Facility costs: \$114,460.46 (Accountant's certification was provided).

3. Evaluation of Application

The company was required to reduce particulate emissions from the particleboard plant in order to attain compliance with OAR, Chapter 340, Section 25-320(2). The Department reviewed and approved plans and specifications for this facility.

The facility enabled the company to control the particulate matter previously discharged into the atmosphere from cyclones mounted on the Heil particle dryers. If operation of the new wet centrifugal dust collectors is assumed to be at least 90% efficient, the reduction of particulate emissions would be at least 102 tons/year since particulate emissions from the previously uncontrolled cyclones were about 113 tons/year.

It is concluded that this facility does operate satisfactorily and did reduce particulate emissions to the atmosphere. The company, in accordance with cost data submitted in this application will not be able to earn any return on this investment.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$114,460.46 with 80% or more of the cost allocated to pollution control be issued for the facility claimed in Tax Application T-525.

PJJ:kok

Date January 10, 1974

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

1. Applicant

Brooks-Willamette Corporation
Bend Division
P. O. Box 1245
Bend, Oregon

The applicant operates a particleboard manufacturing plant in Bend, Deschutes County, Oregon.

2. Description of Facility

The facility claimed in the application controls the emission of sanderdust to the atmosphere and is described to consist of the following:

1. One (1) Carter-Day Model 72RJ60 baghouse filter unit.
2. Collection and handling ducts.
3. Necessary foundations, fans, motors and electrical controls.

The facility was completed and placed into operation in November, 1972.

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

Facility costs: \$27,009.68 (Accountant's certification was provided).

3. Evaluation of Application

The company was required to reduce the particulate emissions from the particleboard plant in order to attain compliance with OAR, Chapter 340, Section 25-320 (2). The Department reviewed and approved plans and specifications for this facility.

This installation enabled the company to control the emissions from four (4) cyclones with the Carter-Day filter unit. The particleboard plant manufacturing processes create considerable quantities of sanderdust of very small particle size, and the previously existing cyclones were not very effective in controlling these particulate emissions to the atmosphere. The Carter-Day baghouse filter can be expected to have a collection efficiency of 99+% and therefore greatly reduce particulate emissions.

This installation decreased particulate emissions to the atmosphere by about 13 lb/hr or 56 tons a year.

It is concluded that this facility does operate satisfactorily and did reduce particulate emission to the atmosphere. The company, in accordance with cost data submitted in this application, will not be able to earn any return on this investment.

4. Director's Recommendation

It is recommended that a Pollution Control Facility Certificate bearing the cost of \$27,009.68 with 80% or more of the cost allocated to pollution control be issued for the facility claimed in Tax Application T-526.

PJJ:kok



ENVIRONMENTAL QUALITY COMMISSION

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DIARMUID F. O'SCANNLAIN
Director

MEMORANDUM

TO: Environmental Quality Commission
FROM: Director
SUBJECT: Agenda Item E. January 25, 1974 EQC Meeting

Alkali Lake Waste Disposal Site - Authority for
Disposal of Stored Pesticide Residues

BACKGROUND

The Alkali Lake Disposal site was established in 1968 by Chemical Waste Storage and Disposition, Inc. (Chem-Waste). The site is located in Lake County, approximately 55 miles north northeast of Lakeview. This site has been utilized for storage of 2,4-D and MCP pesticide manufacturing wastes from Rhodia, Inc., Chipman Division, for disposal of metallic chlorides from Oregon Metallurgical Corporation, and for other miscellaneous wastes.

During the period from February 1969 through December 1971, approximately twenty-five thousand 55-gallon drums of pesticide manufacturing wastes from the Portland plant of Rhodia Inc., Chipman Division were transported to Chem-Waste's Alkali Lake site. At the request of Chem-Waste, Oregon State University agreed to conduct appropriate experimental land disposal studies for these wastes at Alkali Lake. The pesticide wastes were to be stored at the site until the experimental work was completed and suitable disposal procedures could be developed.



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In 1969, Oregon State University was awarded a Federal grant to determine the feasibility of land disposal of the Rhodia pesticide wastes. Under this program, OSU has completed experiments at the Alkali Lake site which have demonstrated that biological degradation of these wastes in soil is a feasible disposal method.

With regard to disposal of other wastes at the site, Oregon Metallurgical Corporation contracted with Chem-Waste in 1970 for disposal of metallic chlorides which were produced in Ore-Met's titanium plant at Albany. Approximately 100 tons of this waste material was buried at the Alkali Lake site during the period from December 1970 through August 1971. Disposal of the metallic chloride wastes was monitored by DEQ and was conducted according to the Department's recommendations. In addition, an unknown quantity of miscellaneous materials including paint pigment and solvent wastes has been stored and disposed of at the site.

With the passage of HB 1931 by the 1971 Oregon Legislature, regulatory authority over Environmentally Hazardous Wastes was assigned to DEQ. Pesticide wastes are defined in this law as environmentally hazardous and therefore this Department became responsible for regulating storage and disposal of pesticide wastes at the Alkali Lake site. Under an earlier statute, the State Department of Agriculture had issued Chem-Waste a permit for storage at the site, but not for disposal. The Department of Agriculture permit expired June 30, 1971. In late 1971, the Departments of Agriculture and Environmental Quality reviewed the conditions and activities at the site. Several undesirable conditions and operations, such as numerous leaking drums and inadequate security was noted at that time, in addition to the fact that more than one million gallons of pesticide wastes were accumulated without a practical disposal method having been demonstrated. Consequently, DEQ and the Department of Agriculture issued two joint directives, one on December 8, 1971 and a second on January 24, 1972 which required Chem-Waste to:

1. Cease transporting any waste materials to the site and to not dispose of any wastes at the site.
2. Bring all operations at the site into strict compliance with the permit issued by the State Department of Agriculture;
3. Prepare and submit for DEQ approval a detailed plan for ultimate disposition of wastes stored at the site;
4. Move all pesticide waste containers into the 10 acre fenced enclosure and improve security measures at the site;
5. Prepare and submit an inventory of all pesticide waste containers at the site;
6. Mark all containers at the site;
7. Rebarrel all leaking containers or transfer contents to bulk storage and;

8. Provide sound pallets under all drums.

The conditions of these directives required Chem-Waste to make certain improvements in management of the site and provided the opportunity for the company to obtain the necessary license that would authorize adequate disposal of the wastes. Subsequent to the December 8, 1971 and January 24, 1972 directives, transportation of wastes into the site was discontinued and all drums were moved into the 10 acre enclosure. However, compliance with the other requirements of the directives has not been achieved.

On March 24, 1972, the EQC adopted Procedures for Issuance, Denial, Modification and Revocation of Licenses for the Disposal of Environmentally Hazardous Wastes. These rules became effective April 15, 1972. Chem-Waste was required by law to apply to the Department for a disposal site license within 60 days thereafter, or by June 14, 1972, if they wished to continue storage or disposal of pesticide wastes at the Alkali Lake Site. The EQC and Department staff visited the site on June 9, 1972 and the Department presented a status report at an EQC meeting in Lakeview on the same day.

Shortly after the June 14, 1972 deadline had passed without receipt of a license application from the company, the Department filed suit against Chem-Waste in Washington County Circuit Court. The Department's suit requested a decree for:

1. Requiring Chem-Waste to make application to DEQ pursuant to environmentally hazardous waste statutes, for a license to operate the Alkali Lake site;
2. Requiring Chem-Waste to cease and desist from adding environmentally hazardous wastes to the site;
3. Judgement against the site as a nuisance; and
4. Judgement for other relief as the Court may deem equitable and just.

FACTUAL ANALYSIS

There has been little or no activity at the site since early 1972, after all wastes were moved into the 10 acre fenced storage area. The storage area is located near the southwestern edge of Alkali Lake, about three miles west of U. S. route 395, and is surrounded by a three strand barb wire fence. It is estimated that 23,000-24,000 fifty-five gallon drums of pesticide manufacturing wastes are now stored on the 10 acre site. Waste from a large number of drums is leaking onto the soil in the storage area. Less than half of the drums are still in sound condition. Many of the drums have large holes or collapsed heads.

The wastes stored at the site generally contain 20-40% 2,4-D or MCP salts, 15-30% phenolic and cresol salts, plus caustic and water. The greatest apparent hazards to humans presented by the drum storage area

are the offensive odor of the phenol compounds in the waste and the caustic properties of the waste. Direct contact with waste could result in skin burns. Although it is doubtful that a person entering the storage area would actually consume some of the waste, an oral dose of one to two ounces could be sufficient to cause serious illness or death. The chances of human exposure in the storage area will increase with time as larger quantities of waste are spilled onto the storage area.

Beyond the hazards to humans in the immediate storage area, there are serious potential hazards to a larger area surrounding the site. If storage is continued in the present manner, the storage drums will further deteriorate and increasing quantities of waste will spill onto the storage area. Contaminated soil or dust blown from the storage area could result in residues on the forage of cattle grazing nearby and could conceivably cause skin burns on humans. It is also likely that during the summer, the odorous phenolics evaporating from the storage area would occasionally be blown toward the highway east of the site and expose residents near the highway and motorists to an objectionable odor.

The Department's suit against Chem-Waste was tried in Washington County Circuit Court on August 23, and 24, 1973. The Court's opinion was issued on December 3, 1973 and denied the Department's request that Chem-Waste be required to apply for a license for the site. Although the opinion states that the site is a nuisance, the Department's request that the defendant abate the nuisance also was denied on the basis that "... the State will not be allowed to complain in a court of equity where the condition of which it now complains was aided and abetted by the State itself and it would now, after disabling the defendant, ask this Court to require the defendant to abate the nuisance." The only request that the Court did allow was that Chem-Waste desist from adding further wastes to the site.

Obviously then, the Court's opinion was detrimental to the Department's objective of achieving proper disposal of the pesticide wastes stored at Alkali Lake. The following alternatives should be considered for pursuing this objective:

1. The December 3 opinion can be appealed to the State Court of Appeals. The Department's Counsel believes that a favorable opinion could be obtained from the Court of Appeals within 4-5 months.
2. The site could be condemned by the State and the waste disposed under the direction of the Department. These authorities are provided in Chapter 778, 1973 Oregon Laws. Specifically, Section 5 of Chapter 778 authorizes the use of pollution control bond funds for acquisition of real property for the disposal of environmentally hazardous wastes and for disposal of environmentally hazardous wastes by the Department whenever an emergency is found to exist. In addition, Section 7 of Chapter 778 authorizes the Commission to acquire real property for the disposal of environmentally hazardous wastes by instituting condemnation proceedings and Section 10 authorizes the Department to collect, remove or treat such wastes if any

person fails to do so in accordance with law. Furthermore, Section 11 provides that the responsible person shall be obligated for expenses incurred by the Department under Section 10.

3. Another alternative would be to proceed essentially as in the second alternative but to request the original producer of the waste, Rhodia, Inc., Chipman Division, to fund, in part or in whole, the cost of disposal operations.
4. The last alternative would be to take no further action to achieve proper disposal of the wastes.

In considering the above alternatives, a number of related issues and possible consequences must be also recognized, including the following:

- a. If the December 3 opinion is appealed and the appeal decision is favorable to the Department, it is possible if not likely, that the case would be appealed by Chem-Waste to a higher court. If the company complies as fully as possible to a court decision requiring proper disposal of the wastes, it is doubtful that the company would be financially able to carry out an adequate disposal program. Testimony presented at the August 1973 trial revealed that Chem-Waste has no cash assets and title to the 5600 acres of Alkali Lake property, except for the 10 acres on which the waste is stored, has been transferred to the company's stockholders. Therefore Chem-Waste is without significant assets with which to finance proper disposal. However this may not preclude holding the corporate officers, directors and shareholders liable for disposal costs.
- b. The total cost of proper disposal of the wastes stored at Alkali Lake has been estimated by the Department to be approximately \$385,000. Disposal would involve injecting the waste six to twelve inches below the soil surface on 1200 acres of land adjacent to Alkali Lake. Areas used for disposal would be fenced, seeded with range grasses and monitored for five years after completion of disposal operations. If the Department were to undertake disposal operations, it would be necessary to acquire the entire 5600 acre site so that an adequate buffer zone could be provided around the disposal areas. It would also be necessary to contract the project to a private firm. The disposal cost estimate includes \$355,000 for all equipment and manpower costs plus contingencies and contractor profit, and an additional \$30,000 for the value of the site property.
- c. If the Alkali Lake site is acquired by the Commission for disposal of pesticide wastes now stored there, some consideration should be given to potential future uses of the site. The site is suitable for disposal of other hazardous wastes and in the long run might be utilized for this purpose. However, no specific designated use could be given at this time.

CONCLUSIONS

Based upon the background and facts presented above concerning the Chem-Waste Alkali Lake disposal site, the following conclusions have been reached:

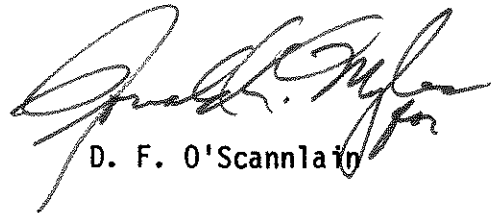
1. The pesticide residues stored at Alkali Lake present potential hazards to people and the general environment surrounding the site, and are a source of objectionable odors to area residents and motorists. If action is not taken to properly dispose of these wastes, then these hazardous and objectionable conditions can be expected to worsen as more drums deteriorate and will persist for many years in the future. In addition, as more drums deteriorate, disposal operations will become more difficult and more costly. Accordingly, the necessary steps should be undertaken immediately to provide for proper disposal of these wastes in the shortest possible time.
2. The court opinion resulting from the trial of the Department's suit against Chem-Waste was not favorable to the Department's objective of implementing proper resolution of the Alkali Lake situation. The Department and its legal counsel believe the suit has merit and can be successfully appealed in a higher court.
3. Due to the financial condition of Chem-Waste, and even in the event of a favorable judgement on the Department's appeal by a higher court, it is extremely doubtful that the company could cover the costs of proper disposal. Therefore it is nearly certain that the State funds will be required to finance part, if not all, of the disposal costs. Another possible source of funds is the Chipman Division of Rhodia, Inc.
4. Legislation enacted by 1973 Oregon Legislature provided sufficient legal authority for the Department to condemn the Alkali Lake site, to dispose of the wastes in question, to use pollution control bond funds for disposal operations and to recover disposal costs from Chem-Waste. It appears that utilizing these new authorities would be the most expeditious method of achieving proper waste disposal. In order to proceed in this manner, it will be necessary to seek Legislative approval to commit pollution control bond funds for land acquisition and disposal operations at Alkali Lake.

DIRECTOR'S RECOMMENDATIONS

In view of the findings of the Department, the Director recommends that the Commission declare the present conditions at the Alkali Lake site an emergency and the Department be authorized and directed to:

1. Institute proceedings immediately to condemn the Alkali Lake site on behalf of the Commission.
2. As soon as possible, request Legislative approval for use of \$385,000 in pollution control bond funds to acquire the Alkali Lake site and dispose of the stored pesticide residues.

3. Request Rhodia, Inc. Chipman Division to pledge whatever funds it can to offset disposal costs incurred by the State.
4. Proceed with disposal operations as soon as possible after condemnation has been completed and Legislative approval for commitment of funds has been received.
5. Appeal the Circuit Court opinion on the Department's suit against Chem-Waste to the State Court of Appeals as a contingency measure.



D. F. O'Scannlain

PHW:mm
1/14/74



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DIARMUID F. O'SCANNLAIN
Director

MEMORANDUM

To : Environmental Quality Commission

From : Director

Subject: Agenda Item No. F, January 25, 1974 EQC Meeting

Public Hearing on and Adoption of Rules
Pertaining to the Subsurface Disposal
of Sewage

Background

The EQC at its meeting in Eugene on December 17, 1973 chose not to adopt the proposed subsurface sewage disposal rules after taking testimony which indicated that certain amendments should be considered. As an alternative, suggested by the Director, the Commission decided to make appropriate revisions and at its meeting in Portland on January 25, 1974 to adopt the proposed rules, effective immediately.

Since the December Commission meeting, the Department has considered and made several changes in the proposed rules considered at Eugene. Those changes considered to be major are set forth in the report as additions or deletions to December's proposed rules. Minor changes in the form of single word additions or deletions, punctuation, etc. are not detailed in the report but are identified in the copy of the revised proposed rules (red cover) you have before you. As noted on page one, deletions from December's proposed rules are bracketed and additions underlined.

An errata list has been prepared and is also in your books as part of the proposed revised rules. It includes all changes to the proposed revised rules to correct errors in typing or reference. The only new item included in the errata list is the provision for



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protection against health hazards which is to be added to the second paragraph on page 23. It is self-explanatory.

Over 4,000 copies of the revised proposed rules and errata list were distributed beginning January 3, 1974 to and through county and DEQ regional offices, the Association of Oregon Counties, League of Oregon Cities, Home Builders and Real Estate Associations and others, to those who testified at the hearings held in November and December 1973 throughout Oregon on the December proposed rules, and to others requesting copies.

MAJOR CHANGES TO THE DECEMBER PROPOSED RULES

Additions and Revisions:

Page 1 - "Statement of Purpose"

To set forth the broad intent of the rules - protection of public health and the quality of public waters.

Page 2 - Definition of "Bedroom"

This was necessary to avoid expanding bedrooms in a home disguised as other types of rooms with the result being an inadequately sized system.

Page 4 - Definition of "Dwelling"

Expanded to include hotels, motels, and apartments, to make the definition more complete.

Definition of "Effective Sidewall" expanded for clarification.

Page 7 - Definition of "Public Health Hazard" expanded.

States that a malfunctioning sewage disposal system is in fact a public health hazard.

Page 10 - Definition of "Soil Permeability" added as a new definition.

Necessary to clarify and standardize this usage.

Page 12 - A statement added as the last sentence on the page to clarify the soil textural classification chart on page 13.

Pages 16-17-18 - Defines "available" as it refers to community or areawide sewerage system. Provides guidelines for determining at the local level when connection to a sewerage system should be required in lieu of allowing subsurface sewage systems. This is based upon distance in feet and number of dwellings to be served. Generally,

the greater the number of dwellings to be served the greater the distance a developer may be required to go to connect to a sewerage system.

Pages 18 and 19 - Includes a section on abandonment of septic tanks as requested by one of the Commission members at the December 17 hearing.

In response to valid criticism of the new section, as it appears in the printed rules, by the Multnomah County Health Department, the staff determined that the abandonment section would better serve the purposes for which it was intended if some flexibility were allowed to avoid working hardship on, for instance, owners of deep-buried concrete-lined cesspools. Accordingly, the staff now offers the following substitute wording for subsection I., on pages 18 and 19:

I. Procedure for Disposal System Abandonment

1. When a sewerage system becomes available and the building sewer has been connected thereto, or when the source of sewage has been eliminated, the Director or his authorized representative may require that the owner or controller of the property have the septic tank, seepage pit, or cesspool cleaned of sludge and filled with clean bank-run gravel or other material specified by the Director or his authorized representative.

2. No permit or authorization for connection to a sewerage system shall issue, nor shall any permit for construction or installation of a replacement septic tank, seepage pit, or cesspool issue, until the owner or controller of the property has made binding commitments to comply with any conditions regarding abandonment of the existing septic tank, seepage pit, or cesspool required by the Director or his authorized representative under authority of Subsection I.1. of this Section.

Page 20 - Minimum separation distance expanded to include groundwater, interceptors, cutbanks, or ditches which intercept groundwater.

Necessary to guard against a common problem of septic tank effluent breaking out of cutbanks, etc.

Two (2) footnotes added for clarification purposes.

Page 21 - One (1) footnote added for clarification purposes.

Page 22 - Two (2) new paragraphs added to allow flexibility in approving lots that have inadequate space for a full replacement system.

Page 29 - No. 8 - Requires sewage flow to be consolidated into one septic tank whenever possible. A properly maintained large system is generally more practical and economical to operate than a number of smaller systems.

Page 32 - B. - "Low density area" changed to "rural area". Necessary to better describe the intent of this section. By changing title of the section to "rural area" and tying it to rural zoning, it is felt that the public would better understand the intent. New language added also to help in this clarification.

Page 46 - New sentence added to require permit to install a pit or vault privy. This would also provide some control on chemical toilets. It is considered necessary to control location of disposal of chemical toilet contents as well as the contents of vault privies.

Page 48 - Sets forth the requirement to be licensed before an individual can install septic systems or pump septic tanks, vault toilets, or chemical toilets.

Pages 50 and 51 - Pertains to proper marking of vehicles that engage in sewage disposal business.

Page 61 - Appendix C - New appendix setting forth construction of a "Redundant Disposal Field System".

Deletions:

Page 1 - Definition "A" horizon deleted - not needed as other definitions were expanded.

Page 3 - Definition "Rapid draining materials" changed to "Coarse grain materials". To provide more appropriate and descriptive language.

Page 5 - Definition "Impervious layer" - some words deleted, others added to provide a clearer definition, especially as it pertains to "saturated hydraulic conductivity".

Page 31 - Item "9" at bottom of page deleted as not necessary.

Several changes suggested by the hearings officer were considered by the staff but were found to be impractical or not prudent at this time. Some of those suggestions included elimination of the triangle on page 13, provision for successive one-year renewals of construction permits without a new application, fee or inspection and allowance for modified fill disposal fields under controlled conditions. A copy of his report is in your books.


DIRECTOR'S RECOMMENDATION

It is the Director's recommendation that the "Proposed Rules Pertaining to Standards for Subsurface Sewage and Nonwater-carried Waste Disposal", comprised of:

1. Red-covered document dated January, 1974;
2. Errata sheet inserted therein; and
3. Substituted language for "Procedure for Disposal System Abandonment", Section III, subsection I on pages 18 and 19 of the red-covered document;

be adopted, effective immediately.

It is the Director's further recommendation that the Commission authorize him to establish a land sewage task force comprised of knowledgeable individuals throughout the State of Oregon to review these rules during 1974 and to recommend further changes effective January 1, 1975, which shall take into account such issues as regional differences of climate, soil and ground water conditions, alternative sewage systems, and systems specifications and material requirements.


DIARMUID F. O'SCANNLAIN
Director

1/15/74

BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE OF OREGON

To: Environmental Quality Commission
From: Thomas Guilbert, Hearings Officer
Subject: Proposed Rules for the Subsurface Disposal of Sewage

In my report for the December 17 meeting of the Commission, I pledged to submit at this time a fuller report of my evaluation of testimony I received in 17 public hearings sessions in 10 cities in late November and early December. In the interim period, I have submitted my evaluations and recommendations to the Department staff for their use in revising the proposed rules. For the Commission's convenience, I have ordered and keyed my summary evaluations of testimony received according to the page numbers in the Department's revised proposed rules, dated January 1974.

Page 2, definition (4): "bedroom". In the November edition of the proposed rules, projected quantities of sewage flows for dwellings were estimated on a per person basis, with a footnote specifying that calculations should project two persons per bedroom. Testimony was received from some county officials who would enforce the system that this placed them in a difficult position when approving systems for dwellings that included rooms which might be used as bedrooms at a future time by the present owner or by a successive owner. I recommended elimination of this potential loophole.

Page 3, definition (9): coarse grain materials. The inclusion in the proposed rules of references to saturated hydraulic conductivity, with its units of feet per day, caused great confusion with more-familiar percolation rates, measured in inches per hour. Since this confusion was expressed most often by county sanitarians, the very professionals who will implement and enforce the proposed rules, I recommended deletion of all references to both saturated hydraulic conductivity and percolation tests. See also definition (7), page 2; definition (28), page 5; deleted definition (36), page 6; deleted definition (38), page 7; definitions (42) and (46) and deleted definition (45), page 8; Subsection VI. A.5., page 31; Subsection VI. B., page 32; Subsection VI. C. L., page 33; and Subsection VI. G. 1., page 40.

Page 4, definition (22): effective sidewall. Since previous State Health Division rules had calculated seepage area on the basis of the bottom area of the trench, while the proposed rules substitute sidewall area, there were some questions in testimony about how to make the new calculations. I recommended greater explicitness.

Page 5, definition (27): ground water, perched. Although this item was defined in the November rules, it was not used as a complete phrase in its most crucial application, at Subsection VI. A. 3 on page 30 of the revised proposed rules. See discussion of page 8, definition (43) below.

Page 7, definition (40): public health hazard. Some county sanitarians who testified were concerned that the use of this term in Subsection IV. B. 3., now on page 21 of the revised proposed rules, and Subsection VI. B., on page 32, would place on them the burden of proving that a failing system ipso facto constitutes a public health hazard. I recommended more explicitness.

Page 8, definition (43): saturated zone. The use of this term in Subsection VI. A. 3. on page 30 of the revised proposed rules necessitated inclusion of a definition which could be easily found. Many witnesses, not knowing that the term was defined under "zone, saturated" in the November proposed rules, confused the saturated zone with a temporarily perched liquid water body, calling both the "water table." I recommended redrafting to obviate confusion.

Pages 11-13, definition (56): soil texture. On the basis of testimony by Hollis Gunter and Bill Harris at the Albany hearings, I recommended to the Department staff that this section be pared to its definition of "clay" and that the charts on page 34 of the revised proposed rules be re-drafted exclusively in terms of clay content of the soils.

Page 14, definition (61): unsaturated zone. See comments relating to definitions (27) and (43) above.

Page 16, Subsection III. E. Repeated requests were made at the hearings for a definition of "available". I recommended to the Department staff that it try to define the term for at least some possible situations.

Page 18, Subsection III. H. This Subsection was the focus of the greatest attention of any part of the proposed rules. Most testimony on the subject requested exemption of persons holding State Health Division permits or approvals of any kind, or county permits or approvals. Some testimony tended to show, however, that in at least some instances, permits or approvals had been granted with only the most casual perusal of the land and plans for installation, or even with no review at all. Further, many members of the public saw no distinction between the State Health Division's permits for construction and installation and its "feasibility studies" which were less extensively researched. Thus, there is little assurance that systems could be installed on such lots which would not endanger the public health or degrade the quality of public waters. For this reason, your hearings officer recommended to the Department staff, and recommends to the Commission, that this section be tightened up to limit the continuing effect of prior permits and approvals to those explicitly authorizing construction of a system, and limit those to a duration no longer than that for which the Department's permits are valid, that is, one year from the date of issuance. My evaluation of testimony received further indicates that no danger to the public health or public waters would ensue from allowing the local representative of the Department to grant successive one-year extensions of construction permits without re-application and collection of the required fee, and without re-inspection, upon a finding that there has been no significant change in relevant conditions since the inspection prior to the granting of a permit.

In order to avoid causing hardship on the holders of existing lots, whether or not such holders have any form of assurance from the county or the State Health Division that they will be permitted to install a system, I recommended to the staff that the rules allow special consideration of certain requirements, such as the required size of a replacement area (see comments below relating to page 22 of the rules), or in rural areas (see comments relative to page 32 of the rules). However, my evaluation of testimony received is that accepting at face value prior assurances given by county or state agencies is not a desirable method of protecting landowners, and may cause damage to public waters or cause a public health hazard.

Page 20, Subsection IV. A. 3. I recommended changes in the language of this subsection to reflect testimony given in Bend about the lack of danger to adjacent elevated irrigation ditches prevalent in that area and testimony about the danger of roadside ditches which intercept groundwater. See also Subsection IV. A. 6. on page 21.

Page 21, Subsection IV. B. 1. I recommended a change in the language in direct response to testimony of Stan Soli at Albany that many household detergents are petroleum derivatives.

Subsection IV. B. 3. passim. Senator Hector Macpherson at Albany, echoed by Water Commissioner Heinz Neumann of Seal Rock at Newport, noted that requiring that a subsurface system not "affect" public waters sets a standard higher than that required for the best municipal sewage treatment system. I recommended that the language be changed to answer that criticism.

Page 22, Subsection IV. B. 4. b. In direct response to suggestions made by Russell Tripp at Albany and the Clackamas County Board of Commissioners at Portland, I recommended to the Department staff that the requirement for a replacement area be waived where there will be a hook-up to a sewer system within five years.

Subsection IV. B. 4. c. To lessen the hardship on property owners holding lots that would have been approved for the installation of a system prior to the State Health Division's imposition in May 1973 of a requirement of a full replacement area; and to take some of the sting out of the sterner requirement of Subsection III. H. on page 18 (negating many prior approvals), I recommended addition of a section allowing the area between disposal lines to be used as a replacement area for lots existing prior to the effective date of these rules. However, since I received testimony indicating that damage to an existing system might result from driving installation equipment over the disposal trenches, I could recommend such an installation only where both the original and replacement disposal fields were installed simultaneously. This is a modification of an idea first propounded by Percy Watkinson at the Newport hearings. See also Section X, appendix C, at page 61.

Pages 24-26, Subsection IV. B. 9. See the recommendation above relating to definition (4): "bedroom". Most of the testimony received at the hearings related to the discrepancy between the requirement in the November rules for 375 gallons capacity per space in mobile home parks and 75 gallons capacity per person in single family dwellings, which seemed to assume an occupancy averaging five persons per mobile home. In written testimony timely received, the State Health Division testified that it had experienced a high rate of failures under previous rules requiring 250 gallons capacity per space. Lacking the technical expertise to evaluate this data, I submitted the testimony without evaluation to the Department staff.

Page 29, Subsection V. C. 8. I recommended inclusion of this subsection to clarify a difference in philosophy between the Department and the State Health Division which was not made explicit in the November rules. This was in direct response to a question of Nell Kuonen of Klamath Falls and the answer given her by the Department staff member attending that hearing, David O'Guinn.

Page 30, Subsection VI. A. 3. The first two sentences of this subsection as drafted in the November rules caused great confusion

throughout the State, as evidenced by unrelieved testimony relating to the "seasonal high saturated zone". I recommended re-drafting to alleviate the confusion. See also the recommendations relating to definitions (27) and (43) above.

Page 31, Subsection VI. A. 6. I recommended that the section relating to accumulation of surface water be deleted both because it eliminated many acceptable areas of the State and because it was redundant with Subsection VI. A. 3, which precludes installations where temporarily perched groundwater would come into contact with a disposal trench. I further recommended, in response to extensive testimony outside of the Willamette Valley, that installations of drain fields be allowed in filled or modified soils where the soil characteristics were defined by the Department, and under conditions prescribed by it.

Page 32, Subsection VI. B. Second only the Department's policy on prior approvals (see comments regarding page 18, Subsection III. H.), and like the requirement for replacement areas, related to the ability to build on lots existing when the rules come into effect, this subsection was the subject of a greater quantity and intensity of testimony than any other. Excepting some isolated instances where the witnesses misconstrued the intent of the subsection as that of allowing a system to fail so long as it is far enough away from other people (see comments regarding definition (40) above), the response of witnesses to the addition of this new subsection was enthusiastic. In fact, the bulk of testimony received on this subsection requested an expansion of its applicability, either by reducing the minimum required setback from a property line or public waters from 250 feet to a smaller figure, or by making approval mandatory where certain conditions, less stringent than the conditions for a standard system, are met. Several professional sanitarians, however, testified that, depending on local conditions, 250 feet might not be adequate to insure public health and prevent water quality degradation; and that in approving an other-than-standard system they would like to have the power to attach conditions to their approval to require modification of the system design to insure that it would not fail.

Accordingly, I recommended to the Department staff, and I recommend to the Commission, that the subsection be retained, but that the arbitrary 250 foot criterion for determining which lots are low density be modified in such a manner that regional differences can be recognized without at the same time committing the entire determination to the local enforcing officer, who may be under strong pressure to enlarge this "loophole" to an extent that the purpose of the rules is circumvented. To allow the local enforcing officer the power to impose conditions on a non-standard system installed in a rural area, however, I recommend rejection of testimony received requesting that granting of approval of non-standard systems under such circumstances be non-discretionary with the local enforcing officer.

Page 33, Subsection VI. C. 1. See comments relating to definitions (9) and (22) above.

Subsections VI. C. 2. & 3. See comments relating to definition (56) above.

Page 37, Subsection VI. D. 4. a. Directly responding to testimony given at Pendleton by C. E. Westfall, that "Orangeburg" pipe comes in eight-foot lengths, I recommended that the separation between the distribution box and perforated line be reduced from five to four feet, to allow for cutting the length in half and the use of both halves.

Page 38, Subsection VI. D. 5. d. Responding to the testimony of local sanitarians that their job is made easier if the Department's preferred standards are mandatory, I recommended the change in the subsection.

Page 48, Subsection IX. A. was omitted from the November rules, and this technical error was noted in testimony on several occasions.

Page 50, Subsection IX. G. My recommendation to change this section was in direct response to the testimony of Fred Van Natta in Albany that DEQ and PUC requirements may be thought to conflict on truck identification.

Page 53, Appendix A, Subsection C. 1. Herman Yung and Harold B. Salisbury testified in Portland that a change in the gauge of steel required for septic tanks should be preceded by months' or years' notice, to allow manufacturers like themselves time to exhaust existing stockpiles and re-order. A change such as this would leave manufacturers with unusable sheets of steel and, since they buy on a quota allotment, they may not be able to get more for months. Unable to evaluate the public health and water quality aspects of the proposed gauge change, I submitted this testimony to Department staff with the recommendation that the gauge not be changed if that is consistent with the purpose of the rules.

Page 55, Appendix A, Subsection C. 7. Several witnesses testified that the requirement in the November rules of hubbed cast iron was unduly restrictive. Unable, due to lack of technical expertise, to evaluate this testimony, I submitted it to Department staff.

Page 57, note accompanying Diagram 1 - Several witnesses testified that Subsection V. D. on page 29, read together with Diagram 1 on page 57, appeared to require a two-compartment tank. I recommended a clarification be made on this point.

Page 59, Appendix B, Subsection II A. 5. William X. Rempelos at Coos Bay suggested deletion of "float" from this line, since that switch works only on column pumps. Lacking technical expertise, I submitted this to the staff without evaluation.


Appendix B, Subsection II. B. 1. A technical error in this Subsection was discovered by Jack Barnett, Chief Plumbing Inspector for Multnomah County, at the Portland hearings. I recommended to Department staff that it be rectified.

Page 61, Appendix B, Subsection III. C. Several witnesses testified that the most popular distribution box in Oregon installations has inside bottom dimensions of 14 by 14 inches, due to the taper of the casting mold. William X. Rempelos suggested at Coos Bay that a minimum square inch total area for the bottom of the box be substituted for a minimum linear dimension and, lacking technical expertise to evaluate this suggestion, I transmitted it to Department staff.

Page 61, Appendix C. See comments relating to page 22, Subsection IV. B. 4. c. above.

With regard to two other topics upon which a great deal of testimony was received, appeals procedures and so-called "package" treatment systems, my evaluation of the testimony received, together with my knowledge of rules presently being drafted with the Department, caused me to recommend non-inclusion in these rules of specific provisions relating to those topics. However, interest in these subjects is high state-wide, and I recommended to the Department staff that rules be promulgated in the near future to cover these concerns.

Submitted this 31st day of December 1973

A handwritten signature in cursive script, reading "Thomas Guilbert", is written above a horizontal line.

Thomas Guilbert, Hearings Officer



State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: Environmental Quality Commission
From: Shirley Shay
Subject: Agenda Item No. G

Date: January 25, 1974

To be given verbally by Dr. Gay.



DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229- 5301

December 28, 1973

TOM McCALL
GOVERNOR

DIARUID F. O'SCANNLAIN
Director

The Honorable Jason Boe, Co-Chairman
The Honorable Richard O. Eymann, Co-Chairman
State Emergency Board
115 State Capitol Building
Salem, Oregon 97310

Gentlemen:

Since last spring, state and federal officials from ten agencies in Oregon and Washington, plus representatives from Oregon State University and the Oregon Environmental Council, have labored as an ad hoc Task Force to formulate a comprehensive monitoring program to be carried out in the event of broadscale spraying of any pesticide to combat the Tussock Moth. As the coordinating agency for this Task Force, and on behalf of all of its members, the Department of Environmental Quality (DEQ) requests that the Emergency Board commit \$267,725 to help fund the Task Force's recommended pesticide monitoring program. The total cost is estimated to be about \$600,000. The cost not borne by the Emergency Board allocation is to be borne by outside (federal) funds and by the state agencies involved in the program, through their present budgets as in-kind contributions of manpower and facilities. The Emergency Board allocation of \$267,725 would provide an expenditure limitation increase (\$4,000) for the Game Commission, and supplemental appropriations for the Fish Commission (\$1,000) and the DEQ (\$262,725). More than half of the DEQ appropriation would be used to contract the services of Oregon's Department of Agriculture (\$98,800) and Oregon State University (\$47,700). Emergency Board authorization is therefore also sought for the Department of Agriculture and Oregon State University to receive and expend such contract funds.

The proposed monitoring program has the following objectives:

1. To establish baseline information about pesticide residues already present in the target area, before conduct of any broadscale spray operation.
2. To measure increased concentrations of pesticide residues in air, water, and indicator life forms resulting from spraying. Identical measurements would be made (during the 1973-75 biennium) at increasing intervals

after spraying to observe how residue concentrations are maintained and distributed in the environment over time.

3. To interpret (where technically feasible) the information obtained about residual pesticide concentrations in terms of discernible environmental impacts.

If Oregon's request for the use of DDT is approved by the U.S. Environmental Protection Agency (EPA), the environmental emergency will not be over --- it will merely assume a different focus. Serious environmental impacts may occur from the indiscriminate spraying of chemical pesticides as well as from extensive insect damage to crops. Figuratively speaking, Oregon's environment may be "damned if you do (spray DDT) and damned if you don't." Spraying (especially using a long-lived chemical like DDT) risks possible contamination of waterways, air sheds, soil, forest litter, and forage, plus subsequent build-up of chemical residues in forest food chains. However, not spraying (without assurance of effective natural controls) risks extensive timber loss, increased forest fire danger, and water quality deterioration from erosion accelerated by increased clear-cutting. The basic emergency is, therefore, one of being forced to use a potentially destructive agent to combat a clearly destructive insect pest. In this Hobson's choice situation, responsible officials must carefully define criteria for their action alternatives and, once action is taken, carefully monitor the results. The monitoring process, regardless of its findings, is an essential part of a responsible approach to Oregon's Tussock moth emergency for several reasons.

First, measurement of chemical residues in animals, plants, air, water, soils, etc., is the essential first step in determining how the pesticide is distributed in the environment. This critical knowledge is also needed to determine whether fish and game contain residue levels which make them unacceptable for human consumption. Such monitoring information is the indispensable data base from which to estimate any biological effects of pesticide use on animal populations, water quality, soil micro-organisms, or any other life forms.

Second, while it was not the Task Force's purpose or intent to influence federal decisions regarding DDT use against the Tussock moth, a comprehensive monitoring proposal should aid the State of Oregon in its application to the EPA for approval to use DDT. By demonstrating our State's commitment to thoroughly monitor the distribution of DDT in the environment, we would demonstrate most effectively the intention to use this chemical with proper restraint. And, because no precedents exist for the requested EPA exemption of DDT from its restricted status, the existence of a comprehensive monitoring proposal could become an important requirement for a successful application.

Third, knowledge gained from a monitoring effort will be valuable during any similar emergency (and no one believes that the Tussock Moth will not be back to haunt our forests in the future). Monitoring will also facilitate a definitive response to any possible claims by individuals of pesticide damage following a spray operation.

In addition to providing information essential to proper management of pesticides, the monitoring program offers some "fringe benefits" --- information which will be of great value to agencies concerned with Oregon's environment and which would not be otherwise available. For example, increased water sampling will aid the DEQ in monitoring general water quality, which may have suffered from the effects of Tussock Moth damage or resulting salvage logging techniques. The Fish Commission could learn of substances other than pesticides, including sediments, soil chemicals, and fire retardants, which can destroy fish habitat and food organisms. The Game Commission could also gain valuable knowledge about the effects of the Tussock Moth damage on natural habitats of predators, mammals, and insects.

It is respectfully requested that

1. An Emergency Fund Allocation of \$262,725 be made to:

Department of Environmental Quality

Chapter 771, Oregon Laws 1973

Section 1 (6) (a)	\$ 61,085
(6) (b)	172,090
(6) (c)	29,550

2. An Emergency Fund Allocation of \$1,000 be made to:

Fish Commission of Oregon

Chapter 767, Oregon Laws 1973

Section 1 (3) (b)	\$ 1,000
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3. An Expenditure Limitation increase of \$4,000 be authorized for:

Oregon State Game Commission

Chapter 185, Oregon Laws 1973

Section 1 (3) (b)	\$ 1,600
(8) (b)	2,400

4. That authority be granted to the following agencies to expend funds which they will receive in payment for services required to implement this monitoring plan, as described in the attached exhibits:

- (1) Oregon Department of Agriculture

\$98,800 contract services with DEQ

\$56,922 contract services with U.S. Forest Service


- (2) Oregon State University

\$47,700 contract services with DEQ


The Honorable Jason Boe, Co-Chairman
The Honorable Richard O. Eymann, Co-Chairman
December 28, 1973
Page 4

The above will be used to monitor the use of pesticides for control of the infestation of the Tussock Moth.

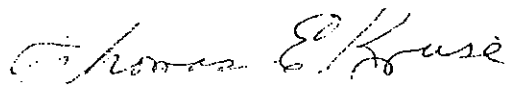
Sincerely,



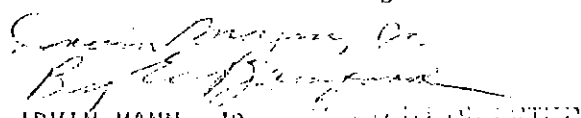
DIARMUID F. O'SCANNLAIN
Director



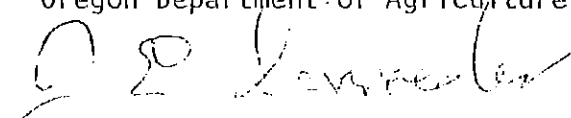
JOHN W. MC KEAN
Director
Oregon State Game Commission



DR. THOMAS E. KRUSE
Director
Fish Commission of Oregon



IRVIN MANN, JR.
Director
Oregon Department of Agriculture



J. E. SCHROEDER
State Forester
Oregon Department of Forestry

WEG:RLG:ahc
Attachments

cc: The Honorable Thomas L. McCall
cc: Members of ad hoc Task Force - Tussock Moth (see attached list)



State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE MEMO

To: *H. Henson; Shirley Shay*

Date: *January 2, 1974*

From: *W. Henson*

Subject: *January 1974 Commission Agenda item*

The attached was delivered by NWRO for Jan meeting. I have read the staff report etc and it looks fine to me. Adequate public notice has been given re - State Implementation Plan, report is ~~in~~ except for planning agenda item no one's signature. NWRO is planning on presenting the report to the Commission (probably Tom Bepler)



ENVIRONMENTAL QUALITY COMMISSION

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

TOM McCALL
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Portland

DIARMUID F. O'SCANNLAIN
Director

MEMORANDUM

To: : Environmental Quality Commission
From : Director
Subject: Agenda Item No. H , January 25, 1974 EQC Meeting
Compliance Schedule Modification--Oregon Steel Mills
(Front Avenue), Portland, Oregon SIC 3312

Background

Oregon Steel Mills owns and operates two plants in the Portland area. The oldest plant, whose operation is the subject of this report, is located at 5200 N. W. Front Avenue (Guilds Lake industrial area) and the other plant is located in the Rivergate industrial area in North Portland.

The basic operation of both plants consists of melting scrap steel, or prerduced iron ore, casting the steel and rolling the cast steel into finished products. The melting process associated with these types of operations can result in air pollution. Oregon Steel Mills recognized these problems in 1964, and proceeded to install the most complete control system available at that time. When the Rivergate plant was built in the fall of 1969, it was also equipped with the best available air pollution control equipment prior to start up.

With the advance of control technology and more stringent control regulations, the Columbia-Willamette Air Pollution Authority (CWAPA) informed Oregon Steel Mills in early 1971, that further control of the melt process was required at the Front Avenue plant; specifically, the emission from the charging and tapping of the electric arc furnaces had to be greatly reduced to meet standards. On October 15, 1971, CWAPA and Oregon Steel Mills entered into an agreement which called for the construction of a new furnace at Rivergate which would allow the discontinuance of the melting facility at Front Avenue on or before June 30, 1974.

On October 20, 1972, the original compliance agreement was amended to allow the installation of a new type melting furnace with complete air pollution controls instead of completely discontinuing melting operations at the Front Avenue plant. This new system is unlike the typical arc furnace. It utilizes a CRA furnace which employs a



Contains
Recycled
Materials

continuous charge, melt and tap of materials, and it is fully expected by the Department and Oregon Steel Mills to be well within compliance with the Department's standards.

In a letter dated November 30, 1973, Oregon Steel Mills is now requesting modification of its existing compliance schedule to permit an additional six months' operation of the two existing melt furnaces at Front Avenue.

Discussion

Oregon Steel Mills has requested a six months' extension from the final shut down date of June 30, 1974, for the two electric arc furnaces at Front Avenue until December 31, 1974. During this period, one of the three following phases of furnace operation may occur:

1. CRA furnace + "A" Furnace (existing)
2. CRA furnace + "B" Furnace (existing)
3. "A" Furnace + "B" Furnace

Condition 3 would occur only if the CRA furnace was down for an extended period which would normally require crew layoff.

The six months' extension request is based upon several factors related to an existing steel shortage. According to Oregon Steel Mills, its 1974 steel production was programmed in accordance with the furnace operation permitted by the existing compliance schedule; specifically, six months' operation of the old Front Avenue arc furnaces, six months' operation of the new CRA furnace at Front Avenue, 12 months' operation of the existing Rivergate furnace, and nine months' operation of the new Rivergate furnace. A loss of one month's production in September 1973, due to equipment breakdown at the existing Rivergate facility and approximately three months' delay in the start up of the new Rivergate furnace due to design changes and extended equipment delivery have created a deficit in committed production. The extended operation of the Front Avenue electric arc furnaces is requested to make up this deficit and allow Oregon Steel Mills to supply the local users which are unable to procure materials from other suppliers.

Analysis

The Front Avenue plant at which Oregon Steel Mills requests a six months' extension to operate one or both of the existing electric arc furnaces is located in the highly industrialized area of Northwest Portland known as Guilds Lake. No private residences are in the immediate vicinity of the plant; however, it is easily visible from the Willamette Heights area of North Portland.

The plant is bounded on the east by the Willamette River, Flintkote Company on the north, Chevron Asphalt Company to the west, and the Oregon Steel Mills scrap yard to the south. The area predominately surrounding the plant is occupied by fuel and oil tank farms.

The emissions from this operation are predominately metallic oxide particulate matter which is reddish in color and highly visible. The

visible nature of the emissions has been the greatest source of complaint; however, complaints of particulate fallout have also been received. During 1972 and 1973, eight complaints were received, seven were related to visible emissions, and one concerned particle fallout.

It should be understood that the emissions are not continuous. A typical melt of scrap takes approximately three hours. During this period, the furnace will be charged on three occasions with approximately seven tons of metal. The total period of emissions for the three charges will amount to 20 to 25 minutes. Also, during a melt period, one tap will be conducted which will result in emissions for 10 to 12 minutes. Therefore, during a typical three-hour melt, 30 to 35 minutes of emissions can occur.

Current emissions from the existing two-furnace operation at the Front Avenue plant amount to approximately 100 to 125 tons of particulate matter per year. Operations using one existing arc furnace (A or B) plus the new CRA furnace are estimated at 50 to 70 tons per year.

With both arc furnaces operating during shut down of the CRA furnace, emissions would not be expected to exceed current levels and could result in an improved condition since the pellets used by the CRA furnace would also be used in the arc furnaces. Melting pellets is a much cleaner operation since the furnace roof does not have to be removed during the furnace charging phase.

Particulate air quality levels in the vicinity of the Oregon Steel plant are the highest in the Portland Interstate Air Quality Control Region and control of particulate emission from this facility is a very significant part of the Oregon Clean Air Implementation Plan.

Granting of the six months' extension until December 31, 1974, however, would not exceed the mandatory compliance date of May 1, 1975, for all particulate emission sources set forth in the State of Oregon Implementation Plan.

Conclusion

1. Oregon Steel Mills has advised the Department the requested six-month extension to operate one and sometimes both existing electric arc furnaces at the Front Avenue Plant is necessary to make up 1974 steel supply deficits caused by loss of production in September, 1973, and delays in start up of a new Rivergate furnace. (The staff has requested Oregon Steel Mills to have representatives at the January 25, 1974 EQC meeting to further discuss this need.)

2. In a letter dated October 9, 1973, Farwest Steel Corporation of Eugene, Oregon, supports Oregon Steel Mills' claim of a national and local steel shortage, especially for bars and small structural shapes produced at the Front Avenue plant. Farwest Steel Corporation advises that as a major Oregon Steel Mills customer, extended operation of this facility is important to their operation and to Oregon's economy.


3. The new Rivergate furnace installation is behind schedule due to design changes which have resulted in a control installation four times larger than that originally projected.

4. From an overall environmental standpoint, the Department believes that under the most abnormal conditions, that is, operation of both existing arc furnaces, conditions will be no worse than presently exist, but probably will be improved due to the greater use of pellets. Private residences should not be affected other than from an esthetic standpoint due to the periodic visible emissions. Particulate fallout could result in a periodic complaint from workers parking their cars in the vicinity of Oregon Steel Mills.

Recommendation

It is the Director's recommendation that the request for compliance schedule modification be granted and an order be adopted granting this modification under the following conditions:

1. The operation of the Front Avenue electric arc furnaces identified as "A" furnace and "B" furnace shall be terminated on or before December 31, 1974. In the event Oregon Steel Mills sells or otherwise transfers ownership or control of said property and equipment, Oregon Steel Mills shall advise the new owner or lessee of the December 31, 1974 shut down requirement and that any future operation of the existing electric arc furnaces (A and B) beyond the date of December 31, 1974, shall only be conducted after adequate control equipment has been approved by the Department and installed.
2. Oregon Steel Mills shall operate A and B furnaces simultaneously only in the event of mandatory CRA furnace shut down in which case Oregon Steel Mills shall immediately inform the Department of the circumstances and expected length of time A and B furnaces will be operating simultaneously.
3. Every effort shall be made by the company to conduct and maintain the Front Avenue melting operations at the lowest practicable levels of emission and shall utilize pellets and clean scrap to the maximum extent possible.
4. Oregon Steel Mills shall submit to the Department by not later than October 1, 1974, a written report confirming progress towards compliance of the Front Avenue plant by December 31, 1974.


DIARMUID F. O'SCANNLAIN
Director

1/8/74

Attachments: Oregon Steel Mills letter, November 30, 1973
Farwest Steel letter, October 9, 1973



DEPARTMENT OF ENVIRONMENTAL QUALITY

NEWS ITEM ONLY

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

TOM McCALL
GOVERNOR

DIARMUID F. O'SCANNLAIN
Director

PUBLIC NOTICE

Notice of Application for a Compliance Schedule Modification

Oregon Steel Mills, located at 5200 N.W. Front Avenue, Portland, Oregon, has applied to the Department of Environmental Quality to modify the company's existing compliance schedule to allow an additional six month's operation of one or both of the existing electric arc furnaces.

The existing compliance schedule requires the present electric arc furnaces to be in compliance by June 30, 1974, the modified schedule would allow operation until December 30, 1974.

Particulate emissions from the existing two furnace operation are estimated at 100 to 125 tons per year. During the requested six-month period of additional operation, Oregon Steel Mills desires to operate one of the existing electric arc furnaces in conjunction with a newly installed low emission type furnace (CRA). Particulate emissions under this latter operating condition are estimated at between 50 to 70 tons per year. Should the newly installed low emission furnace (CRA) experience operational problems which require an extended period of shut down, Oregon Steel Mills requests approval to operate both existing electric arc furnaces. Particulate emissions during this operational phase would not exceed present levels and the Department expects the emissions to be lower because the cleaner raw materials used in the CRA furnace will be utilized in the existing arc furnaces.

Oregon Steel Mills request for modification of the existing compliance schedule will be considered by the Environmental Quality Commission at its January 25, 1974, meeting which commences at 9:00 a.m. in the Public Service Building Auditorium (Second Floor), 920 S.W. Sixth, Portland, Oregon.

Anyone who wishes to comment regarding this matter may either submit written comment or appear and testify at the hearing.

Written comments must be received not later than January 20, 1974 and should be addressed to:

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

If further information is desired regarding this matter, please write or phone Mr. Tom Bispham of the Department of Environmental Quality, Northwest Region Office, at 238-8471.



OREGON STEEL MILLS

DIVISION OF GILMORE STEEL CORPORATION
5200 N.W. FRONT AVENUE • PORTLAND, OREGON 97210 • (503) 228-7641

November 30, 1973

The Environmental Quality Commission
Department of Environmental Quality
Northwest Region
1010 N. E. Couch
Portland, Oregon 97232

Gentlemen:

Oregon Steel Mills owns and operates two plants in the Portland area, a bar mill on Front Avenue and a new plate mill in the Port of Portland's Rivergate Industrial Development. On October 15, 1971, we entered into an agreement with the Columbia-Willamette Air Pollution Authority to replace the Front Avenue melting facilities with a new furnace at our Rivergate plant. As a part of this agreement, Oregon Steel Mills agreed to shut down all melting facilities at Front Avenue on or before June 30, 1974. This decision was based primarily on economics, because at that time it would have required 18 months and an estimated cost of over a million dollars to bring the Front Avenue Melt Shop within 85% of the then existing clean air requirements. Based on the facts at that time, it was decided it would be more prudent to invest our major capital expenditures in new, fully complying facilities at our Rivergate site.

On October 20, 1972, Oregon Steel Mills and the Columbia-Willamette Air Pollution Authority amended the 1971 agreement to provide for the installation of a new melting process furnace at our Front Avenue site, to be known as the CRA furnace. This new furnace was designed to be in full compliance with all air quality requirements and standards. No other basic changes were made in the original 1971 agreement.

Today, a little over two years since entering into the original agreement, we come before your Agency to request a six month extension for the final shut down of the Front Avenue melting facilities from June 30, 1974 to December 31, 1974. We have not previously requested special consideration in this matter, but since the original agreement was entered into, there have been changed conditions and circumstances which we feel justify this request being made at this time.

First, our new furnace construction at Rivergate, which was originally anticipated to be completed and ready for start-up during the first quarter of 1974, is estimated for a mid-year 1974 start-up at best, due to construction delays and the lengthening of delivery times for the various complicated equipment related to this installation. This total project, involving the furnace and related materials handling equipment, now under contract and proceeding as expeditiously as possible, represents a capital investment of approximately 9 million dollars.

Second, the entire economic situation concerning the steel industry has changed drastically. A serious steel shortage now exists locally as well as world wide.

In view of this, we programmed full rolling production for the year of 1974 for both the Front Avenue and Rivergate mills. To provide the necessary rolling stock, we programmed a combined melt production based on the same operation as now exists at Front Avenue for the first half of the year; the CRA furnace for the second half of the year; our existing furnace at Rivergate for the entire year, and our new furnace at Rivergate for at least three-fourth of 1974.

Unfortunately, during September we lost almost the entire month's production at our Rivergate plant due to the loss of our furnace transformer. This loss, together with the delay in completion and start-up of our new furnace at Rivergate, results in a critical deficit of melted steel for the balance of 1973 and for our 1974 rolling production.

It is true, that in granting this request, there would necessarily be a delay in the air quality improvement anticipated in the original 1971 agreement. If granted this time extension, we would continue our present operation practices at Front Avenue through to December 31, 1974. However, during this time, the same basic program agreed to in 1971 would be followed, except the gradual replacement of Front Avenue capacity by Rivergate capacity would be delayed by approximately six months.

We have tried to express what we feel are justified reasons for the granting of this request, but in addition we feel our past record in the entire area of air quality control should be given full consideration. In this regard, we were the first major industry in the Portland area to recognize the air pollution problem and take concrete steps to correct our contribution. The Air Quality Control Code was adopted by the City of Portland on March 30, 1964 and by March of the following year, Oregon Steel Mills entered into an agreement with American Air Filter to provide the necessary equipment to bring our plant within the code requirements existing at that time. This installation was completed in September 1965 and, as it was one of the first major items of this type, Mayor Schrunk issued a special press release on September 3, 1964 which stated in part, "In cooperation with our City people, the Oregon Steel Mills proceeded

November 30, 1973

-3-

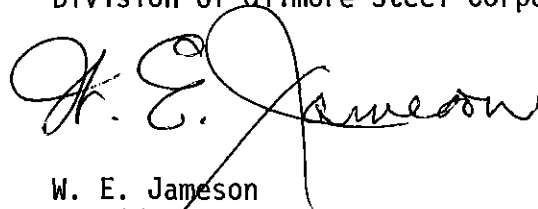
with minimum delay in the installation of the elaborate and complex air cleaning system being put into operation today -- a system, which will, I understand, collect over six tons per day of fine dust which heretofore has been disposed of in the air over our City. On behalf of the City government, the City Council, and particularly on behalf of the citizens of Portland, may I express our appreciation to the Management of Oregon Steel Mills for this significant contribution to cleaner air in Portland. I hope it serves as a catalyst and an incentive for other firms involved".

Of course times have changed, conditions have changed, and air quality control technology has greatly improved, but during these years, there has been no change in the basic philosophy and policy of Oregon Steel Mills. That of recognizing our responsibility and doing our best to be a good citizen in the community in which we live and work.

As expressed above, we now find ourselves in a most difficult and serious situation -- not caused by any lack of action on our part -- or on the part of anyone else, but due primarily to the series of circumstances that have changed over the course of the last two years. Actually, the new fume exhaust system being installed at our Rivergate plant exceeds all known requirements and, based on the best engineering available today, will do an excellent control job so that once again we will be leading our industry. Additionally, we now have two full time Environmental Engineers on our staff to police and control our operations.

Therefore, we feel that the request we are making to you is not unreasonable or that it exceeds what a local industry of our past reputation might reasonably expect to be granted under the existing circumstances. Your favorable consideration of this request is respectfully requested.

Very truly yours,
OREGON STEEL MILLS
Division of Gilmore Steel Corporation

A handwritten signature in cursive script, appearing to read "W. E. Jameson". The signature is written in dark ink and is positioned above the typed name and title.

W. E. Jameson
President

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NOV 3 1973

**DEPARTMENT OF
ENVIRONMENTAL QUALITY**



OREGON STEEL MILLS

DIVISION OF GILMORE STEEL CORPORATION

5200 N.W. FRONT AVENUE • PORTLAND, OREGON 97210 • (503) 228-7641

New Mailing Address:

P. O. Box 2760

Portland, Oregon 97208

November 30, 1973

Department of Environmental Quality
Northwest Region Office
1010 N. E. Couch
Portland, Oregon 97232

Attention: Mr. Jack Weathersbee, Director

Regarding: Front Avenue Melt Shop Operation

Gentlemen:

Reference is made to our meeting of October 3, 1973. As you will recall, it was our intention at that time to present a request to your Commission, at their November meeting, for a six month time extension for our Front Avenue Melt Shop operation.

Because of construction delays at Rivergate and the slow start up of the CRA furnace at Front Avenue, we decided to wait until the December meeting when we felt we could be more specific concerning these delays and resulting lost production. Unfortunately, we are now thirty days later and these conditions have not changed materially.

Therefore rather than delay this matter any longer, because it is one of the most critical unknowns now facing our company's operations, we felt we would submit our request to your Board in the form of a letter, which is enclosed. Based on the previous negotiations with the Columbia-Willamette Air Pollution Authority and our accomplishments to date, we feel this is a valid and reasonable request and sincerely solicit your recommendation for approval to your Commission.

Also enclosed are two documents required by the Front Avenue and Rivergate permits. They are:

1. Status of Compliance Agreement - Front Avenue Plant
due January 2, 1974.
2. Summary of Control System Status Report - Rivergate Plant,
due December 31, 1973.

Department of Environmental Quality

November 30, 1973

-2-

If any of us can be of further help to you or your staff on this matter prior to the December 17th meeting, please call. Thank you again for your continued cooperation.

Very truly yours,

OREGON STEEL MILLS

A handwritten signature in cursive script that reads "George Gilmour". The signature is written in dark ink and is positioned above the typed name and title.

George Gilmour

Environmental & Safety Engineer

GG/pjm

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**DEPARTMENT OF
ENVIRONMENTAL QUALITY**

FRONT AVENUE MELT SHOP

November 29, 1973

PURPOSE

Status of Compliance Agreement Report per Section 2.2 of Air Contaminant Discharge Permit No. 261842.

SCHEDULE

- 1 Nov. 1973 Start of the CRA furnace and fume control systems check-out.
- 21 Dec. 1973 Estimated date of completion of CRA furnace and fume control systems check-out. Full production operation from this point forward. Reduction of OSM Melt Shop from two furnaces to one furnace operation. This will reduce annual particulate emissions from 106 tons/year to somewhat over 53 tons/year. (See statement under "OSM Melt Furnace Operation" for normal methods of operation.)
- 30 June 1974 Original date set by permit for Front Avenue shop to be in complete compliance with D.E.Q. (CWAPA) rules.
- 31 Dec. 1974 Requested extended date of compliance. Reasons for additional six month period requested are explained in our "Request for Extension Report".

CRA MELT FURNACE SYSTEM

The CRA furnace fume exhaust systems as described in the previous report of June 13, 1973 are completely installed and are presently in the check-out phase along with the furnace. The Northwest Region office has reviewed the system and approved the design concept. A visit by the Region Field Representative to the job site has as yet not been scheduled. This, of course, has to be performed to finalize system approval. Notification of completed check-out will be forwarded to the Regional Office on or about December 21, 1973.

One correction should be made to the June 13 report. Item 2 under "CRA Melt Furnace System" should be corrected to read: 2. "Ducon" wet collector....

The systems for fume control are installed and operate as shown on drawings:

M-201
M-202
M-203
M-205
M-206
M-207

prepared by Blymyer and Sons for Conzinc Riotinto of Australia.

OSM Front Avenue Melt Shop

November 29, 1973

-2-


The permit also required manometers be installed in the existing baghouse by 1 November 1973. This baghouse has always had manometers, therefore, this condition is satisfied.

O.S.M. MELT FURNACE OPERATION

During the period 21 December 1973 to 31 December 1974, the operation of the Melt Shop would be as follows:

1. CRA Furnace + "A" Furnace, or
2. CRA Furnace + "B" Furnace, or
3. "A" Furnace + "B" Furnace.

Condition 3 would be an abnormal situation. This condition would only occur if the CRA furnace was to have an extended downtime, which would normally require crew lay-offs. The primary reason for maintaining two furnaces on line would be to maintain crew employment and minimum production schedules. In such a case, D.E.Q. would be notified immediately.


George Gilmour
Environmental & Safety Engineer

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**DEPARTMENT OF
ENVIRONMENTAL QUALITY**

OREGON STEEL MILLS

RIVERGATE MELT SHOP

November 29, 1973

PURPOSE

Summary of Control System Status Report per Section 2.3 of Air Contaminant Discharge Permit No. 261865.

SCHEDULE

- 19 Nov. 1973 Submitted to D.E.Q. - Northwest Region, specifications and drawings, schematics, general arrangements and location of control equipment. Drawings: I.C.A. / D.E.Q. -- 1, 2 & 3 for review. Delay in submission of this information was due to problem encountered in the selection of a suitable system supplier. However this should not seriously affect the original completion schedule.
- 15 Dec. 1974 Submission to D.E.Q. of hood design, both side draft and canopy, and pellet tower evacuation system design drawings for review; No. 1 and No. 2 furnaces.
- 4 Jan. 1974 Obtain from D.E.Q. approval of system design.
- 20 Jan. 1974 Start of equipment fabrication.
- 1 Mar. 1974 Start of system erection.
- 15 Apr. 1974 Completion of system fabrication.
- 1 May 1974 Completion of system erection and start of system check-out.
- 15 May 1974 Completion of system check out.
- 1 June 1974 System ready for operation, meshing with start-up of new furnace.

The above schedule is, of course, subject to change if unforeseen difficulties arise. With the existing equipment supply conditions in the United States, deliveries of critical items such as fans, motors, control devices and steel can be, and in fact are, delayed.

At this time, Oregon Steel Mills feel there is enough flexibility in the schedule to take care of most of these unforeseen difficulties. However, it is felt attention should be drawn to the fact the schedule may be delayed.

OSM Rivergate Melt Shop

November 29, 1973

-2-

The system is felt to be the best available using present technology. Several innovations and unique design features are included which will make complete control of Melt Shop fumes and dust a reality. Details of the fume control system operation are in the hands of the D.E.Q.-Northwest Regional Office, as previously stated; therefore, it is felt a complete system description in this report is unnecessary.


George Gilmour
Environmental & Safety Engineer

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NOV 30 1973

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**DEPARTMENT OF
ENVIRONMENTAL QUALITY**

FARWEST STEEL

Farwest Steel Corporation
Post Office Box 632
Eugene, Oregon 97401
2000 Henderson Avenue
Telephone 503/343-7781

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
OCT 10 1973

OFFICE OF THE DIRECTOR

DALE FISCHER
President

October 9, 1973

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

Dear Mr. O'Scannlain:

I think a very severe impact is going to hit the economy of Oregon for the reason that the Front Street steel mill, Oregon Steel Rolling Mills, a division of Gilmore Steel, is going to be closed down some time during or by the end of the first half of 1974. I believe this is by agreement with the past air pollution control authority. I do not fault the agreement, because at the time it was discussed and entered into, who could have foreseen the present world-wide steel shortage that is now severely affecting the United States and the Pacific Northwest.

I believe the whole Pacific Coast and the Pacific Northwest are the two most severely affected areas in the United States. We do not have enough local steel production. Inasmuch as we are a very large Oregon Steel customer, we are very concerned. Losing 100,000 tons per year of steel production is no laughing matter. All on my own, I suggest that you review the matter. An extension of the life of this mill might be most appropriate in view of the economic circumstances readily available for all to see.

I readily admit the mill is old and perhaps not too economical. Furthermore, Gilmore is expanding their production at Rivergate. However, the expansion is in the form of products other than those presently rolled at the Front Street location. The Front Street mill produces bars and small structurals which are sorely needed in this market. At the present time, we are trying to buy bars from Eastern sources. The added freight costs of these bars will be at least \$40.00 per ton, which is a very substantial burden to add to Oregon's

FARWEST—FARBEST

Mr. Diarmuid F. O'Scannlain
October 9, 1973
Page 2.

steel-short economy. I appreciate the Gilmore dilemma made up of, among other things, the following:


- 1) Old, inefficient and somewhat air polluting mill;
- 2) Price ceilings that are too low;
- 3) High scrap prices;
- 4) The electric energy and natural gas perhaps can be better utilized at Rivergate.

In spite of these handicaps, I think Oregon's economy needs an extension of life at Front Street. The extension should be based solely on the criteria of steel for our domestic market here in the Pacific Northwest. I trust that you realize that the world market is higher than our ceiling prices. Selling the products overseas produced by an extended mill life will aid the nation's balance of payments. However, it will not do too much, if anything, for the short term economy of the Pacific Northwest.

The above is solely my own thinking. Should you desire further discussion with me after your quick perusal of the situation, I will be more than happy to drive to Portland for a meeting. Inasmuch as the operations of Farwest Steel are non-polluting, I think it might be appropriate and safe for me to take you to lunch.

Yours very truly,

FARWEST STEEL CORPORATION



Dale Fischer
President

DF:cmp



ENVIRONMENTAL QUALITY COMMISSION

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

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GOVERNOR

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Chairman, McMinnville

GRACE S. PHINNEY
Corvallis

JACKLYN L. HALLOCK
Portland

MORRIS K. CROTHERS
Salem

ARNOLD M. COGAN
Portland

DIARMUID F. O'SCANNLAIN
Director

MEMORANDUM

To : Environmental Quality Commission
From : Director
Subject: Agenda Item No. 1, January 25, 1974, EQC Meeting
(1) LRAPA Variance to Bohemia Incorporated, Cascade Fiber Company, Eugene
(Variance to Board Products Rules, OAR Chapter 340, Section 25-320, and LRAPA Rule 33-060)

Background

Cascade Fiber Company operates a particleboard plant in Eugene, Lane County. The Company has been operating with an existing compliance schedule with a final compliance date of December 31, 1973, adopted by the LRAPA Board on January 10, 1973. The LRAPA has been aware for some time that the Company would be requesting an extension of the existing compliance schedule; and on December 7, 1973, a formal application for a one-year extension was submitted to the Authority, giving as justification the facts that 1) the available methods and opportunities for control of material dryer emissions did not adequately solve the problems without creating difficulties in other areas, and 2) this Company is proceeding as rapidly as possible to control dryer emissions through a combustion source and 100% recycle. Equipment delivery schedules, however, will prohibit start-up of the new controls on an initial dryer until March 1974, and additional units will be installed on the remaining two dryers after sufficient testing has shown that the performance of the equipment is as anticipated. The projected emission reduction for the entire plant is from a current level of 82 lbs/hr to a level of 26 lbs/hr by the end of 1974. The Company has installed controls in other areas reducing particulate emissions from 234 lbs/hr in 1969 to the current level of 82 lbs/hr.

On the basis of information presented by the Company and the LRAPA staff analysis, the LRAPA Board approved a variance for the desired one year, extending compliance to December 31, 1974, subject to the following conditions:

1. The Company submit detailed plans and specifications for the proposed equipment for staff review prior to construction or installation.



Contains
Recycled
Materials

2. The Company submit bi-monthly status reports to indicate progress achieved in its control program.
3. The Company shall undertake all practicable means to achieve an early compliance.
4. The Company shall conduct emission source tests required by the Authority on April 1, 1974, July 1, 1974, and November 30, 1974.


Analysis

It is concluded that the variance as granted meets the requirements of ORS 449.810, and the material submitted by LRAPA satisfies Department review criteria. Attached to this report are the following LRAPA documents:

1. Letters of transmittal
2. The order granting the variance
3. The Authority staff report, including communications with Cascade Fiber Company
4. A copy of the minutes of the Authority Board meeting.

Director's Recommendation

The Director recommends that LRAPA Variance No. 73-2 granted to Cascade Fiber Company be approved as submitted.



DIARMUID F. O'SCANNLAIN
Director

1/8/74

4 attachments

Lane
Regional

AIR
POLLUTION
AUTHORITY

VERNER J. ADKISON
Program Director

16 OAKWAY MALL
EUGENE, OREGON 97401
AC 503 484-0558

BOARD OF DIRECTORS

NANCY HAYWARD
Lane County
DARWIN COURTRIGHT
Springfield
WICKES BEAL
Eugene
GERALD CATES
Cottage Grove
GUS KELLER
Eugene.

December 21, 1973

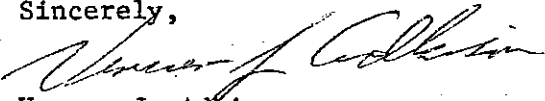
Mr. Diarmuid O'Scannlain
Department of Environmental Quality
1234 S. W. Morrison Street
Portland, Oregon 97205

Re: Cascade Fiber Compliance Variance Request
Weyerhaeuser Company Compliance Variance
Request

Dear Mr. O'Scannlain:

Enclosed you will find the Variances on Cascade Fiber and Weyerhaeuser Company as approved by the Lane Regional Air Pollution Authority Board of Directors on December 13, 1973. This material is signed as we previously indicated in our letter of December 17, 1973. We do request that this information be included in your January agenda.

Sincerely,



Verner J. Adkison
Director

VJA/mw
Encl.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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AIR QUALITY CONTROL
OFFICE OF THE DIRECTOR



16 OAKWAY MALL
EUGENE, OREGON 97401
AC 503 484-0558

VERNER J. ADKISON
Program Director

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Cottage Grove
GUS KELLER
Eugene

19 DEC 1973

ROUTING	
To	Noted by
PJJ	
From: HB	
Action:	

December 17, 1973

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

Re: Cascade Fiber Compliance Variance Request

Dear Mr. O'Scannlain:


Attached you will find information relative to a request for a variance to extend an existing compliance schedule for twelve months. Contained within this packet is major correspondence from the company, the LRAPA staff report and my letter to the Board of Directors concerning this request.

The Lane Regional Air Pollution Authority's Board of Directors hear the request for a time extension on December 13, 1973. At this meeting they voted unanimously to grant this time extension.

Our legal counsel is now preparing the final conditions for the variance to be granted on this facility. As soon as this document is complete, it will be forwarded to your office.

At this time, I am requesting that at your earliest convenience this item be considered for Commission action and approval.

Sincerely,


Verner J. Adkison
Director

VJA/ks

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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DEC 19 1973
AIR QUALITY CONTROL

LANE REGIONAL AIR POLLUTION AUTHORITY
16 Oakway Mall, Eugene, Oregon 97401

In the Matter of:) No. 73-2
)
CASCADE FIBER CO., a division of)
Bohemia Lumber Co., Inc., a)
corporation.) VARIANCE INCLUDING FINDINGS
) and CONCLUSIONS

FINDINGS

I

By a letter received December 7, 1973 petitioner, a corporation, has petitioned for a variance from Rules 21-040 and 33-060 (c) to modify the compliance schedule order dated January 10, 1973 to extend from December 31, 1973 to December 31, 1974 the time to comply with the particulate matter emission standards in Rule 33-060 (c) (4), being 3.0 pounds per 1000 square feet of production.

II

The reasons presented by the petitioner for extending the time for compliance, the tabulation of the projected emissions in pounds per hour under the revised control plan and the status of compliance with the original schedule are shown on the memorandum to the Authority's Board of Directors from Verner J. Adkison dated December 11, 1973, a copy of which memorandum is attached hereto, marked Exhibit A, and incorporated herein by this reference.

III

To deny the requested variance and require strict compliance with the rules of Lane Regional Air Pollution Authority would result in substantial curtailment of the business of the petitioner because alternative methods of compliance would result in higher energy consumption and contribute to a degradation of other aspects of the environment. Additional time is thereafter required for evaluation of the performance of equipment currently ordered and

the ordering and installation of additional units. December 31, 1974 is a reasonable compliance date.

CONCLUSIONS

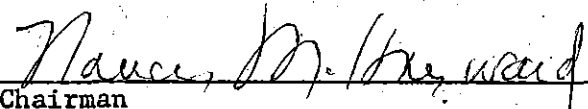
Pursuant to the provisions of ORS Chapter 449 and Lane Regional Air Pollution Authority Rules, Title 21 and 33, Lane Regional Air Pollution Authority has the power to grant the requested variance and said variance should be granted for a limited period of time subject to certain conditions hereinafter set forth. Based upon the foregoing findings of fact and conclusion, the Board of Directors makes the following:

ORDER

NOW THEREFORE IT IS HEREBY ORDERED that a variance from the provisions of Rules 21-040 (Compliance Schedules) and 33-060 (Particulate Matter Emission Standards) be granted to Cascade Fiber Co., a division of Bohemia, Inc. to allow such company to December 31, 1974 to comply with the particulate matter emission standards of 3.0 pounds per 1000 square feet (3/4 basis) of particle board produced by petitioner, subject to the following conditions:

1. Petitioner shall submit for Authority staff review and comment detailed plans and specifications for the proposed production and control equipment prior to construction or installation.
2. Petitioner shall submit bi-monthly status reports indicating progress achieved in its control program.
3. Petitioner shall undertake all practicable means to achieve an early compliance.
4. Petitioner shall conduct emission source tests required by the Authority by April 1, 1974, and January 1, 1975.

Entered at Eugene, Oregon this 13th day of December, 1973.


Chairman

M E M O R A N D U M

To: Lane Regional Air Pollution Board of Directors

From: Verner J. Adkison

Subject: Bohemia Incorporated - Cascade Fiber Company

December 11, 1973

For several months the Lane Regional Air Pollution Authority has been aware that Bohemia Incorporated would be requesting an extension to their existing compliance schedule for the Cascade Fiber Company, particleboard operations. On December 7, 1973 the attached information was submitted by Bohemia in which they are requesting a one year extension to the compliance schedule already in affect for this facility.

RULES AND REGULATIONS - The rules and regulations of the Lane Regional Air Pollution Authority were ammended on September 1, 1971 to include regulations for board products industries. This included regulations on particleboard operations. The limiting emission rate was established at 3 pds per 1,000 sq ft. of production and required the enclosing of the material handling truck dump facility.

The limits established on the Cascade Fiber Operation were thus determined to be 26 pds hr.

COMPLIANCE SCHEDULE - The company submitted a compliance schedule as required by the regulations on June 30, 1972. This compliance schedule was adopted by the Board on January 10, 1973. The final date of compliance was established as December 31, 1973. They are now requesting an extension of this date to December 31, 1974.

JUSTIFICATION FOR EXTENSION AS PRESENTED BY THE COMPANY - 1) In an endeavor to find a solution to the emissions from the material dryers, which would meet the air pollution code and not adversely effect other segments of the environment, a continuing evaluation of control possibilities have been undertaken. The control opportunities available did not appear to adequately solve the problem without creating major difficulties in other areas. 2) The company is now proceeding as rapidly as possible to control emissions from the dryers through a combustion source and 100% recycle. However, the arrival of equipment appears to prohibit the actual start-up of controls until March, 1974 (this would be on one dryer only). After evaluation of the performance of this equipment additional units will be

ordered to handle the other two dryers if the unit performs as anticipated. This would necessitate the date of December 31, 1974 as the final control date.

EMISSION PROJECTIONS - The following is a tabulation of the projected emissions in pds/hr. for the entire control program for this plant.

	<u>Initial Emissions</u>	<u>Reduction</u>	<u>Remaining Emissions</u>
1969	234	-	234
1970	234	30	204
1971	204	23	181
1972	181	45	136
1973	136	54	82
1974 - mid	82	36	56
1974 - end	56	20+	26 (maximum allowed emission rate)

As indicated in the tabulation a substantial amount of control has currently been achieved with additional control anticipated by mid 1974 and final control by the end of 1974. For this company it represents an 89% reduction from the original emissions.

STATUS OF ORIGINAL COMPLIANCE PROGRAM - The company has proceeded in many areas to comply with the authorities rules and regulations. It has been brought to our attention that within the last year there has been an expenditure of \$130,000 to control air contaminant emissions. During the past years the following actions have been accomplished to reduce emissions.

- 1) Enclosed truck dump facilities which have substantially reduced windblown particulate emissions.
- 2) Installed three baghouses to reduce emissions.
- 3) Have converted all the green material air transfer systems and cyclones to a mechanical conveyor system.
- 4) Have eliminated six cyclones from building #2.
- 5) Have ordered a baghouse to eliminate dust from a sawtrim cyclone. The installation of this unit should be completed by June 30, 1974.

The remaining emission points on this facility are two dryers and one pre-dryer. The company has now ordered a burner to combust all emissions from the pre-dryer. If this unit works as successfully as projected the other two dryers will be controlled in this manner.

AMBIENT AIR QUALITY - In this particular area the LRAPA operates a station to measure particulate fallout. The station would be considered an enforcement type station due to its extreme close proximity to this particular source. In reviewing this data the maximum monthly particulate fallout encountered in 1968 was 49 gram per square meter per month. This has steadily diminished to 13.7 for the 1973 year. The arithmetic mean in 1968 was 22.4 vs 9.9 for the 10 months in 1973.

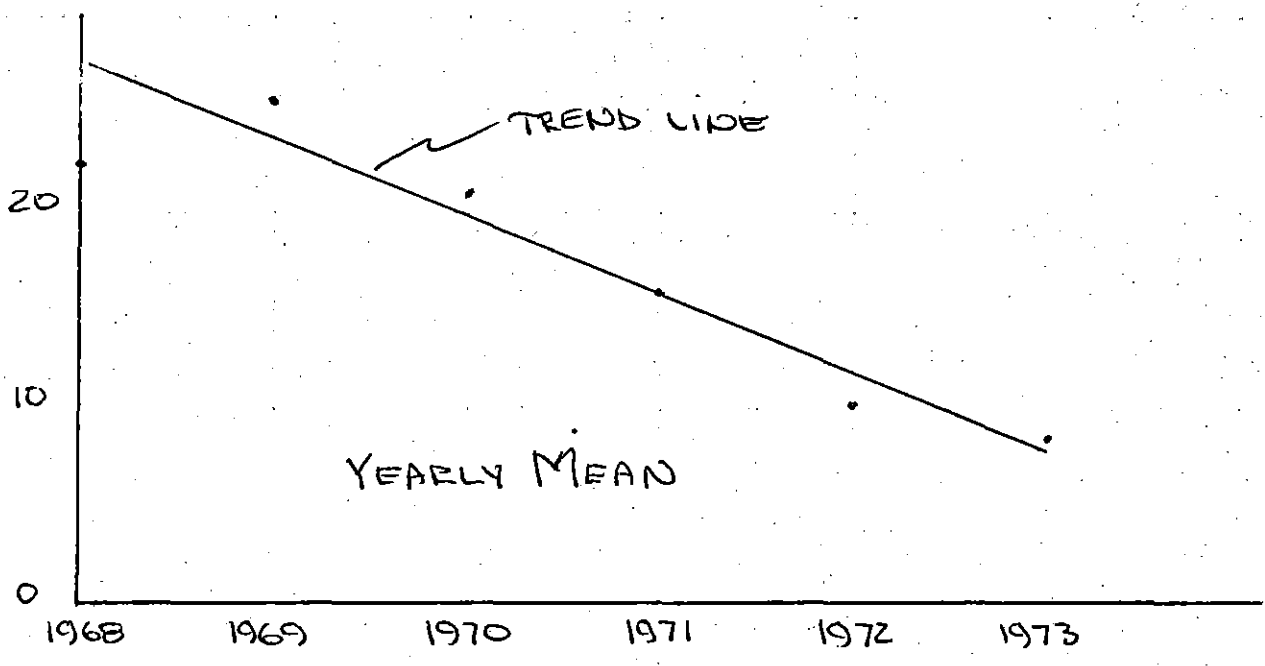
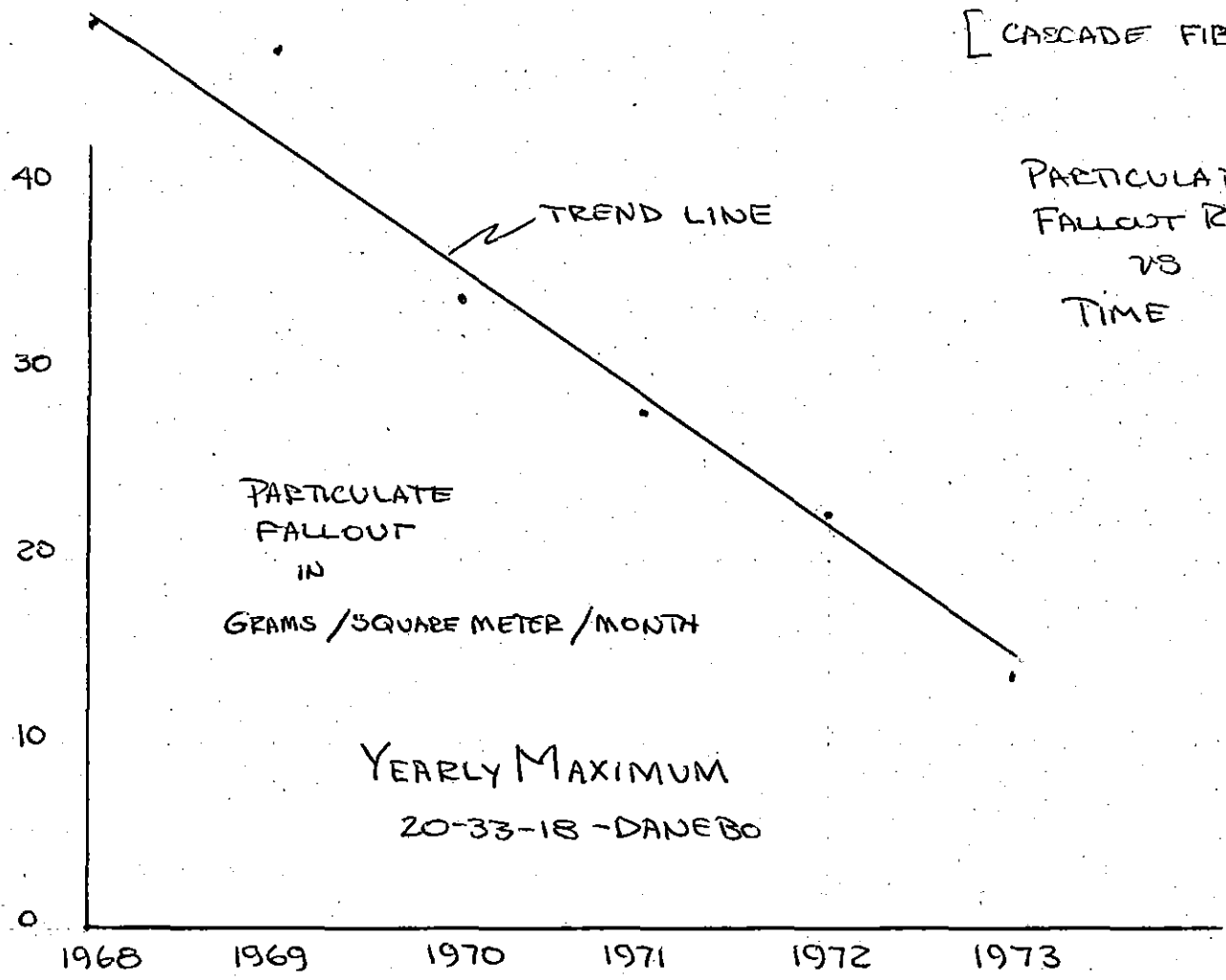
The control actions undertaken by the company have thus substantially reduced the particulate problem in that immediate area. The items remaining to be controlled should have additional affect on the particle fallout and even greater effect on suspended particulate and visibility.

SUMMARY

Bohemia has taken many major steps to alleviate the dust problems at their facility and reduce the emission levels to the limits as established by the Lane Regional Air Pollution Authority's Rules and Regulations. It is felt that their approach to install a baghouse on the remaining dust emission source and the installation of heat recovery burners on the dryers provides an adequate means of control while reducing any adverse impact on the area. It is therefore recommended that in concept the extension be granted for twelve months as requested by this company.

It is further recommended that the company be required to submit source test data, in accordance with LRAPA's procedures as part of the March 1974 evaluation and upon subsequent control equipment installations.

[CASCADE FIBER]



12/12/73
PW

689-0100

BOHEMIA INC.

MAILING ADDRESS P.O. BOX 1819 • 2280 OAKMONT WAY EUGENE, OREGON 97401
TELEPHONE (503) 342-6262 TELEX 364-442

December 7,

RECEIVED
DEC 7 1973

LANE REGIONAL AIR POLLUTION AUTHORITY

Mr. Vern Adkinson
Lane Regional Air Pollution Authority
16 Oakway Mall
Eugene, Oregon 97401

Re: Compliance Schedule Letter
June 30, 1972
Cascade Fiber - Copy Attached

Dear Mr. Adkinson:

This Compliance Schedule as approved by your Board has been completed, with only one exception, Paragraph 4.

An item that we inadvertently omitted in this letter is a bag house for the saw-trim cyclone and cut-up cyclone.

A new 6 head sander was installed on May 1, 1973. Concern for the change in system flow and demand caused the need for review time. These factors have now stabilized, and a bag house will be ordered prior to December 31, 1973. Anticipated delivery time is approximately 4 months. Installation should be completed by June 30, 1974.

The dryer cyclones referred to in Paragraph 4 are as of this time an unresolved problem. By late fall of 1973 several systems had been reviewed:

Blaw-Knox Corp.:

Had reviewed our needs and offered a possible solution, primarily in the form of high efficiency cyclones specifically designed to supposedly meet the air emission standards. At the time guarantees did not come with the equipment.

Western Precipitator:

Gave us the hot pitch on scrubbers. However, they offered no solution to the excessive water discharge problem, another standard that had to be complied with.

Vern Adkinson
December 7, 1973
Page 2

Rotoclone - Air Pollution Control Inc.:

And several other approaches were reviewed. All left some serious unanswered questions.

In December of 1972 a new factor started showing signs of being a point that is now a household word - ENERGY.

Our Company began revising its fuel needs and the contracts or lack of contracts for supply that were beginning to change at this time.

We became impressed with a system that Dastex (a division of Precision Industries Inc.) were perfecting. While we were in the process of reviewing other systems and concerns, we did in December of 1972 enter into a verbal agreement to have a test performed by this company. The equipment began arriving March 1, 1973, and the test was actually conducted on March 22 to 28. We received the formal test results early in May of 1973.

It remains very questionable as to their ability to meet air quality standards because of excessive hydrocarbons.

Again, in our parallel review of potential solutions to our problem Sander Dust Firing became attractive as a method of consuming an unmarketable waste and utilizing it as a source of energy.

We have been searching for what we felt was the most satisfactory method of meeting our responsibilities for compliance with air quality standards.

Our time and efforts have brought us to today. We have ordered a Coen burner package. Its simple task is to Sander Dust Fire the pre-dryer. This is to be a closed system with a total (100%) recycle. This one unit should be installed early in 1974 with an expected start-up date of March 1, 1974. The investment is being made as we have a reasonable degree of confidence in the approach. We are aware that an evaluation will have to be made, and of the requirements that must be met. The results of which will determine our course of action on the remaining dryers.

Should this system fail, we will involve ourselves in securing an alternate. Although we are strongly convinced that any of the current alternatives might offer a solution to air quality, however, they will have a detrimental affect on either water or energy consumption.

Vern Adkinson
December 7, 1973
Page 3


We have complied with the majority of the Compliance Schedule. In excess of \$130,000.00 has been expended in the last year for that which is now completed. Our particulate emissions have been reduced to 82 lbs. per hour. We don't mention these points with the intent of covering up an unfinished task, but we are attempting to prove to you that our intentions are good, our goal is practically reached and that we will complete the task.

A chart is enclosed that indicates our air emission reduction schedule.

We are hereby requesting a one year extension of the Compliance Schedule, with the sincere hope that far less time will be needed.

Yours truly,

BOHEMIA INC.


Hal McCall
Environmental Coordinator

HM:vo

Enclosure



CASCADE FIBER CO.

DIVISION OF BOHEMIA LUMBER COMPANY, INC.

OFFICE AND PLANT
50 NORTH DANEDO AVE.
EUGENE OREGON 97402
503/689-0200

Manufacturers of
Better Forest Products

SALES OFFICE
2280 OAKMONT WAY
EUGENE, OREGON 97401
503/342-6262

June 30, 1972

Lane Regional Air Pollution Authority
Route 1, Box 739
Eugene, Oregon 97402

Gentlemen:

This letter is being submitted to L.R.A.P.A. as a compliance schedule as requested. At the present time Cascade Fiber Co. has ten cyclones remaining to be either put into baghouses or some new type of collector.

At this time we are receiving bids to install two baghouses on six air cyclone systems. The systems on the drier building being put into a baghouse are two small dust pick-up systems and a large cyclone handling material from our hammermills. The total CFM for these three cyclones are approximately 41,000 CFM.

Two other cyclones on the drier building are going to be eliminated by going to mechanical conveying from our shaving storage building.

The two remaining drier cyclones are being examined by a large engineering firm who states that a cyclone can be built that will eliminate the particulate emissions. It is being done in other industries with the same type of problems and has met all their requirements.

The three small cyclones on Building #3, totaling approximately 18,000 CFM, will also be put into a Carter-Day baghouse. These two baghouses should be installed and in operation from 90 to 120 days.

The outside storage pile will be reduced by the elimination of certain mills that we hold the contracts for their shavings. We reviewed our shaving purchases for the past three years and found that over half of the mills have doubled their production. With the loss of three or four mills we should no longer have any outside storage.

If there are any further questions we will be happy to discuss our mutual problems.

Sincerely,

CASCADE FIBER CO.

Paul Hellwege, Plant Manager
ksm/PH

AIR EMISSION REDUCTION SCHEDULE

PPH - Pounds Per Hour

	1969	1970	1971	1972	1973	Mid 1974
Total Emission	234 PPH	234 PPH	204 PPH	181 PPH	136 PPH	82 PPH
Reduction		TRUCK 30 PPH	sum cyclon 23 PPH	cyclon & blower 45 PPH	Baghouse 54 PPH	pro dryer cyclon 36 & sec cyclon
Total After Reduction		204 PPH	181 PPH	136 PPH	82 PPH	56 ** PPH

*15 2 remaining
dryer*

paint 23 #/HR

Anticipated Reduction with New Bag House) and one Sander Dust Fired unit.) 36 PPH.

** This PPH figure does not include the two remaining dryers.

M I N U T E S

LANE REGIONAL AIR POLLUTION AUTHORITY

BOARD MEETING

THURSDAY - DECEMBER 13, 1973

The meeting was called to order at 12:25 p.m. by Chairperson Nancy Hayward in the conference room of the agency offices.

ROLL CALL

Board: Nancy M. Hayward, Chairperson - Lane County; Gus Keller - City of Eugene; Wickes Beal - City of Eugene; Gerald Cates - City of Cottage Grove. (ABSENT: Darwin Courtright - City of Springfield)

Staff: Verner J. Adkison - Director; Joseph A. Lassiter - Program Administrator; Joseph B. Richards - Legal Counsel; Paul Willhite, Dave Gemma, Millie Watson.

Visitors: Paul Hellwege & Hal McCall - Bohemia, Inc.; Jerry Harper & Dick Crabb - Weyerhaeuser Company; Linda Meierjorgen - Springfield News; Neal Rosen - Eugene Register-Guard

MINUTES:

Wickes Beal MOVED to approve the minutes for November. Gus Keller SECONDED and the motion was APPROVED.

EXPENSE REPORT:

Wickes Beal MOVED to approve the expense report for November. Gus Keller SECONDED and the motion was APPROVED.

PUBLIC INFORMATION DISCLOSURE ACT:

Mr. Richards explained the new Public Information Disclosure Act which went into effect on July 1, 1973. He said that all written information in the agency is considered public information except trade secrets or something which might be an unreasonable disclosure that would jepordize an individual. When anything of this nature is requested they should be checked with legal counsel before giving out the information. He recommended that each case be treated individually.

PARKING STRUCTURES:

Mr. Willhite presented a request from Weyerhaeuser Company of Springfield for a permit to construct 164 parking spaces at a new office building. The

spaces would replace existing spaces at the present office buildings and would not increase the total number of parking spaces now being used.

Gus Keller MOVED to approve construction of 164 parking spaces at the new location. Gerald Cates SECONDED and the motion was APPROVED.

DIRECTOR'S REPORT:

Weyerhaeuser Company Variance:

Mr. Willhite explained that on January 10, 1973 the Board had approved a compliance schedule for the Weyerhaeuser Company of Springfield to meet emission regulations on Board Products operations by December 31, 1973. The company has made every effort to meet the emissions limits by the appointed date but delivery of equipment, both production and control, makes it impossible to do so. The plant modernization has already been initiated and is proceeding as rapidly as possible and the agency has received construction notices as required in the initiation of this process modification. The Weyerhaeuser Company is now requesting an extension of the date on the compliance schedule to December 31, 1974 at which time they feel the modernization should be completed.

The Director's recommendation was to extend this compliance schedule on the following conditions: 1) The company shall submit bi-monthly status reports indicating progress achieved in it's control program as outlined in it's control plan schedule. 2) The company shall undertake all practicable means to achieve an early compliance. 3) The company shall conduct emission source tests in accordance with approved Authority procedures within the time scheduling as required by the Agency. 4) A summary of all emissions test for all sources shall be developed in accordance with requirements of the Agency.

Mr. Willhite reported that the Weyerhaeuser Company has agreed to the above conditions.

Gus Keller MOVED to approve a variance to modify the compliance schedule to the date of December 31, 1974 for completion. Gerald Cates SECONDED and the motion was APPROVED.

Bohemia, Incorporated - Cascade Fiber Company Variance:

The Board was informed by Mr. Willhite that on January 10, 1973 a compliance schedule for Cascade Fiber Company with a final completion date of December 31, 1973 had been approved by the Board of Directors. The company is now requesting an extension of twelve months until December 31, 1974 to meet the emission standards of their particleboard operations.

The reasons for this request is presented by the company as follows: 1) In an endeavor to find a solution to the emissions from the material dryers, a continuing evaluation of control possibilities has been undertaken. The control opportunities available did not appear to adequately solve the problem. 2) The company is now proceeding as rapidly as possible to control emissions

from the dryers through a combustion source and 100% recycle. However, the arrival of equipment appears to prohibit the actual start-up of controls until March, 1974. 3) The company has currently achieved a substantial amount of control and, with additional control as anticipated by the end of 1974, the company would reduce their emissions by 89% from the original amount.

Mr. Willhite added that Bohemia has taken many major steps to alleviate the dust problems at their facility and it is felt their approach to install a baghouse on the remaining dust emission source and the installation of heat recovery burners on the dryers provides an adequate means of control while reducing any adverse impact on the area and that the staff recommendation is that the extension be granted for twelve months as requested by the company. It was further recommended that the company be required to submit source test data in accordance with the Agency procedures as part of the March 1974 evaluation and upon subsequent control equipment installations. Mr. Hal McCall who was present, agreed to these conditions.

Wickes Beal MOVED to approve a variance to modify the compliance schedule to the date of December 31, 1974 for completion. Gerald Cates SECONDED and the motion was APPROVED.

Mr. Adkison informed the Board that the variances will be presented at the next meeting for signature by the Chairperson.

DEQ CONTRACT WITH THE AGENCY:

Mr. Lassiter reported that the contract is ready for approval by the Board of Directors and explained the terms as presented to the Department of Environmental Quality. He reported that the Department has tentatively approved the terms as presented and Board approval is required in order to present the contract to the Environmental Quality Commission at their next meeting in Eugene on Monday, December 17th for their formal approval.

It is felt that the terms of the contract are very favorable to the Lane Regional Air Pollution Authority. There will be a total of nine persons employed by the Department who will be housed in the Agency offices and it is planned to have a total of sixteen Agency personnel. Some of the Agency personnel will be performing work for the Department and the money received for these services will be used to hire the additional persons needed to adequately perform the duties required.

Mrs. Beal stated that she felt this was an honor to the Agency as this concept has never been tried by any other State Environmental Agency and that she was very proud of the staff. The entire Board agreed with this statement.

Gerald Cates MOVED to approve the contract as presented. Gus Keller SECONDED and the motion was APPROVED.

ADJOURNMENT:

There being no further business to come before the Board, the meeting was adjourned at 1:45 P.M.

Respectfully submitted,
Millie Watson
Millie Watson
Recording Secretary



ENVIRONMENTAL QUALITY COMMISSION

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

TOM McCALL
GOVERNOR

B. A. McPHILLIPS
Chairman, McMinnville

GRACE S. PHINNEY
Corvallis

JACKLYN L. HALLOCK
Portland

MORRIS K. CROTHERS
Salem

ARNOLD M. COGAN
Portland

DIARMUID F. O'SCANNLAIN
Director

MEMORANDUM

To : Environmental Quality Commission

From : Director

Subject: Agenda Item No. I , January 25, 1974 EQC Meeting

(2) LRAPA Variance 73-1 to Weyerhaeuser Company, Springfield
(Variance to Board Products Rules, OAR Chapter 340,
Section 25-320 and LRAPA Rule 33-060)

Background

Weyerhaeuser Company operates a particleboard plant as part of their manufacturing complex in Springfield, Lane County. The plant has been operating under a compliance schedule with a final compliance date of December 31, 1973, which was approved by the LRAPA Board on January 10, 1973.

Weyerhaeuser began an evaluation which resulted in a plant modernization program and a new program for compliance with the Lane Regional regulations. The new program results in the utilization of significantly lower amounts of energy and achieves levels of emissions lower than those required by the original compliance schedule. In addition to these benefits, the new program also provides for increased production and eliminates many existing emission points.

Delivery of materials needed to complete the modifications to achieve the modernization has been delayed, and as a result the extra time has been requested in order to provide a more realistic compliance date. Under the new schedule, emissions at the plant will be reduced from a current level of 442.1 lbs/hr to a level of 60 lbs/hr in progressive steps throughout 1974. An 88% reduction in particulate emissions will be accomplished under the new schedule of compliance as compared to a 76% particulate emission reduction under the old schedule.

The Lane Regional Air Pollution Authority adopted an order signed December 13, 1973, granting a variance until December 31, 1974, with conditions to protect air quality and for reporting and testing including the following:



Contains
Recycled
Materials

1. The company shall submit bi-monthly status reports indicating progress achieved in the control program.
2. The company shall undertake all practicable means to achieve an early compliance.
3. The company shall conduct emission source tests for various items as listed in the compliance schedule on July 1, 1974, and November 30, 1974.

Analysis

It is concluded that the variance as granted meets the requirements of ORS 449.810, and the material submitted by LRAPA satisfies Department review criteria. Attached to this report are the following LRAPA documents:

1. Letters of transmittal
2. The Order granting the variance
3. The Authority staff report, including communications with Weyerhaeuser
4. A copy of the minutes of the Authority Board meeting.

Director's Recommendation

The Director recommends that LRAPA variance No. 73-1, granted to Weyerhaeuser Company, be approved as submitted.



DIARMUID F. O'SCANNLAIN
Director

1/8/74

4 attachments



16 OAKWAY MALL
EUGENE, OREGON 97401
AC 503 484-0558

VERNER J. ADKISON
Program Director

BOARD OF DIRECTORS

NANCY HAYWARD
Lane County
DARWIN COURTRIGHT
Springfield
WICKES BEAL
Eugene
GERALD CATES
Cottage Grove
GUS KELLER
Eugene

December 21, 1973

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

Re: Cascade Fiber Compliance Variance Request
Weyerhaeuser Company Compliance Variance
Request

Dear Mr. O'Scannlain:

Enclosed you will find the Variances on Cascade Fiber and Weyerhaeuser Company as approved by the Lane Regional Air Pollution Authority Board of Directors on December 13, 1973. This material is signed as we previously indicated in our letter of December 17, 1973. We do request that this information be included in your January agenda.

Sincerely,

Verner J. Adkison
Director

VJA/mw
Encl.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
RECEIVED
DEC 26 1973
AIR QUALITY CONTROL
OFFICE OF THE DIRECTOR



16 OAKWAY MALL
EUGENE, OREGON 97401
AC 503 484-0558

VERNER J. ADKISON
Program Director

December 17, 1973

BOARD OF DIRECTORS

NANCY HAYWARD
Lane County
DARWIN COURTRIGHT
Springfield
WICKES BEAL
Eugene
GERALD CATES
Cottage Grove
GUS KELLER
Eugene

19 DEC 1973

ROUTING	
To	Noted by
PJJ	
From: I+B	
Action:	

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

Re: Weyerhaeuser Company Variance Request

Dear Mr. O'Scannlain:

Attached you will find information relative to a request for a variance to extend an existing compliance schedule for twelve months. Contained within this packet is major correspondence from the company, the LRAPA staff report and my letter to the Board of Directors concerning this request.

The Lane Regional Air Pollution Authority's Board of Directors heard the request for a time extension on December 13, 1973. At this meeting they voted unanimously to grant this time extension.

Our legal counsel is now preparing the final conditions for the variance to be granted on this facility. As soon as this document is complete, it will be forwarded to your office.

At this time, I am requesting that at your earliest convenience this item be considered for Commission action and approval.

Sincerely,

Verner J. Adkison
Director

VJA/lis

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
DEC 19 1973

AIR QUALITY CONTROL

LANE REGIONAL AIR POLLUTION AUTHORITY
16 Oakway Mall, Eugene, Oregon 97401

In the Matter of:) No. 73-1
)
)
VARIANCE TO: WEYERHAEUSER) VARIANCE INCLUDING
) FINDINGS AND CONCLUSIONS
COMPANY, a corporation)
)

FINDINGS

I

By a memorandum received November 20, 1973, Weyerhaeuser Company, a corporation, has petitioned for a variance from Rules 21-040 and 33-060 (c) to modify the compliance schedule order dated January 10, 1973 to extend from December 31, 1973 to December 31, 1974 the time to comply with the particulate matter emission standards in Rule 33-060 (c) (4), being 3.0 pounds per 1000 square feet of production

II

The reasons presented by the petitioner for extending the time for compliance, the tabulation of the projected emissions in pounds per hour under the revised control plan and the status of compliance with the original schedule are shown on the memorandum to the Authority's Board of Directors from Verner J. Adkison dated December 6, 1973, a copy of which memorandum is attached hereto, marked Exhibit A, and incorporated herein by this reference.

III

To deny the requested variance and require strict compliance with the rules of Lane Regional Air Pollution Authority would result in substantial curtailment of the business of the petitioner because alternative methods of compliance result in substantially higher emissions and greater consumption of energy. December 31, 1974 is a reasonable compliance date.

CONCLUSIONS

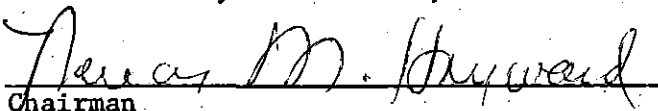
Pursuant to the provisions of ORS Chapter 449 and Lane Regional Air Pollution Authority Rules, Title 21 and 33, Lane Regional Air Pollution Authority has the power to grant the requested variance and said variance should be granted for a limited period of time subject to certain conditions hereinafter set forth. Based upon the foregoing findings of fact and conclusion, the Board of Directors makes the following:

ORDER

NOW THEREFORE IT IS HEREBY ORDERED that a variance from the provisions of Rules 21-040 (Compliance Schedules) and 33-060 (Particulate Matter Emission Standards) be granted to Weyerhaeuser Company, a corporation, to allow such company to December 31, 1974 to comply with the particulate matter emission standards of 3.0 pounds per 1000 square feet of particle board (3/4 basis) produced by petitioner, subject to the following conditions:

1. Petitioner shall submit for Authority staff review and comment detailed plans and specifications for the proposed production and control equipment prior to construction or installation.
2. Petitioner shall submit bi-monthly status reports indicating progress achieved in its control program as outlined in the emission projection schedule contained in Exhibit A attached hereto.
3. Petitioner shall undertake all practicable means to achieve an early compliance.
4. Petitioner shall conduct emission source tests required by the Authority on July 1, 1974 and November 30, 1974.

Entered at Eugene, Oregon this 13th day of December, 1973.


Chairman

(Paul
746-2511
Bob Weylerman
I CALLED ON 12/11 CC

M E M O R A N D U M

TO: LRAPA Board of Directors

FROM: Verner J. Adkison

SUBJECT: Weyerhaeuser Company, Springfield

DATE: December 6, 1973

As the Board has been previously advised the Weyerhaeuser Company in Springfield has requested by variance a modification of compliance schedule in respect to it's particleboard operation. This request was received by the Lane Regional Air Pollution Authority on November 2, 1973. Preliminary review indicated additional information was necessary to provide an adequate review of their request. This information was submitted by the company on November 20, 1973.

After reviewing the submitted material the following summary of findings is presented for your information.

Rules and Regulations

On September 1, 1971 the Lane Regional Air Pollution Authority adopted regulations on the Board Products industry (including particleboard operations). These regulations limit particulate emissions to 3.0 pounds per 1000 sq. ft. of production. This calculates to be 81.9 pounds per hour for the Weyerhaeuser particleboard operation.

On September 30, of that year the company received a copy of the recently adopted regulation.

Compliance Schedule

The regulations required that a compliance schedule be submitted by the company to the Lane Regional Air Pollution Authority. This schedule was received by the Authority on June 30, 1972 and approved by the Board of Directors on January 10, 1973. Final date of compliance was to be December 31, 1973. They are now requesting an extension of this date to December 31, 1974.

Reasons Presented for Requesting the Extension

1. The Company's original interpretation of the regulations allowed for a higher rate of emissions (123.1 pounds per hr.). An actual rate of emissions as allowed renders the original compliance schedule inadequate to meet the emissions limits of 81.9 pounds per hours.
2. Energy consumption as required in the original plan would be substantially higher than in the new proposal. The revised plan saves 3600 horsepower of electrical usage and reduces natural gas usage by 3000 therms/day and finally reduces steam usage by 12,800 pounds/hr.

December 6, 1973

3. Plant modernization is intended to eliminate many emission points while saving energy and increasing production. Delivery of equipment, both production, and control, makes it impossible to meet the December 31, 1973 date. The plant modernization has already been initiated and is proceeding as rapidly as possible. The Agency has received construction notices as required in the initiation of this process modification.

Emission Projections

The following is a tabulation of the projected emissions in pounds per hour under the revised control plan.

<u>Date</u>	<u>Emissions</u>
January 1, 1973	510.7
October 1, 1973	466.2
January 1, 1974	442.1
April 1, 1974	256.9
July 1, 1974	194.7
October 1, 1974	199.7
January 1, 1975	60.0

Allowed limit 81.9

The target of 60 lbs/hr. provides the company with a 21.9 lb./hr. cushion in the event control equipment does not function quite as anticipated.

The new control program represents an 88% reduction from original emissions rates rather than a 76% reduction as previously planned.

Status of Original Compliance Program

The following is a summary listing of the original compliance program milestones and their respective control status at this time.

Hog - Particleboard trim	-	on schedule
Hog - Plywood trim	-	on schedule
Fan 3000	-	control delayed/unit to be deleted by July, 1974.
North End Clean-up	-	completed

Bauers (de-fibrators)	-	control delayed/units will be deleted by January, 1975.
Buttner (dryer)	-	completed
Mec #1 (dryer)	-	control delayed/until March, 1974.
Mec #2 (dryer)	-	completed
Truck dump	-	project initiated/ completion delayed from 12/31/73 to 2/15/74
Particle storage	-	project initiated/ completion delayed from 12/31/73 to 2/15/74

The company has made progress toward achieving compliance. However, delays have arisen on many of their schedules, and full control has not been achieved.

Ambient Air Quality

In respect to suspended particulates, the Springfield area is exceeding the air quality standards. The Agency should make every effort possible to reduce the level of particulate emissions to as low a level as possible to achieve compliance.

The original control plan developed by Weyerhaeuser established a potential controlled emission rate of 123.1 pounds per hour. The new plan anticipates only 60 pounds per hour which is within the limits of 81.9 pounds per hour.

Summary

Weyerhaeuser has attempted to achieve compliance with the Agency's rules and regulations, but has not been completely successful in its endeavor. Plant modernization makes the original control plan inappropriate.

It is felt that the community can best be served by granting the extension in time and revising the permit to reflect this extension.

In granting this time extension the following requirements should be established for the company and agreed upon by the company prior to approval.

1. The company shall submit bi-monthly status reports indicating progress achieved in it's control program as outlined in it's control plan schedule attached herein.
2. The company shall undertake all practicable means to achieve an early compliance.
3. The company shall conduct emission source tests in accordance with approved Authority procedures within the time scheduling which follows:

<u>Items</u>	<u>Test Report to LRAPA</u>
1, 9, 20, 26, 27, 28	July 1, 1974
36	November 30, 1974

A summary of all emissions test for all sources shall be developed in accordance with requirements of the Agency.

By Paul J. Wilk

Verner J. Adkison, Director

The Following Information
was Submitted by The
Weyerhaeuser Company
and is enclosed
for your information

REASONS FOR OVERSHOOTING ORIGINAL SCHEDULE DATE
AND WHY BOARD SHOULD ALLOW ADDITIONAL TIME

Summarizing

No one single factor caused us to overshoot our compliance date. As stated before, we are committed to comply with LRAPA standards. With our commitment in mind, it seems logical to us that with our present approach with all its advantages, the community and the company are best served by your Board allowing the additional time to complete our compliance program.

CONTROL PLAN SCHEDULE

UNIT	NOW	PLANNED	REMARKS	11/73	12/73	01/74	02/74	03/74	04/74	05/74	06/74	07/74	08/74	09/74	10/74	11/74	12/74
PB- 1	8.1	4.0	Higher efficiency cyclone	D	I	C											
PB- 2	0.0	0.0	Deleted	C													
PB- 3	2.9	2.9	No change	C													
PB- 4	2.3	2.3	No change	C													
PB- 5	0.8	0.8	No change	C													
PB- 6	0.3	0.3	No change	C													
PB- 7	0.2	0.2	No change	C													
PB- 8	0.1	0.1	No change	C													
PB- 9	26.9	6.9	Higher efficiency cyclone	D	I	C											
PB-10	0.0	0.0	Deleted	C													
PB-11	1.5	0.0	Will be deleted														C
PB-12	0.2	0.2	No change	C													
PB-13	0.1	0.0	Will be deleted														C
PB-14	0.7	0.0	Will be deleted														C
PB-15	0.2	0.0	Baghouse control			D	I		C								
PB-16	0.4	0.4	No change	C													
PB-17	2.6	2.6	No change	C													
PB-18	0.0	0.0	No change	C													
PB-19	6.8	0.0	Will be deleted														C
PB-20	8.0	7.2	Change flow	C													
PB-21	11.7	0.0	Will be deleted														C
PB-22	8.0	0.0	Will be deleted														C
PB-23	36.7	0.0	Will be deleted														C
PB-24	36.7	0.0	Will be deleted														C
PB-25	36.7	0.0	Will be deleted														C
PB-26	195.0	10.0	Aerodyne collector			D	I		C								
PB-27	10.0	10.0	No change	C													
PB-28	6.9	6.9	No change	C													
PB-29	62.2	0.0	Will be deleted														C
PB-30	0.0	0.0	Enclosing truck dump			D	I		C								
PB-31	0.2	0.2	No change	C													
PB-32	0.0	0.0	No change	C													
PB-33	0.0	0.0	No change	C													
PB-34	0.0	0.0	No change	C													
PB-35	-	0.0	Baghouse control			D	I		C								
PB-36	-	5.0	New dryer	E	O									D	I	C	
PB-37	-	0.0	New burner (baghouse)	*				E/O						D	I	C	
PB-38	-	0.0	Silo's (baghouse)	*				E/O				D	I	C			
PB-39	-	0.0	Second truck dump	*			E/O					D	I	C			

466.2 442.1 256.9 194.7 199.7 60.0

NOTE:
 E ----- Engineering
 O ----- Order
 D ----- Delivery
 I ----- Install
 C ----- Completion/Compliance
 * ----- Engineering in Progress

COMPLIANCE APPROACH (ORIGINAL AND REVISED)

Original Plan

Called for the adding on of such control equipment as baghouses, Aerodyne collectors, and cyclones. This plan did nothing for the reduction of energy and/or production process.

Revised Plan (see attached flow chart)

A. Objectives:

1. Meet and better emission standards
2. Reduce energy demand
3. Reduce fire and explosion hazards
4. Increase press productivity and efficiency
5. Reduce variable cost of production
6. Improve product

B. As reported elsewhere in this report, our projected emission level is 60 pounds/hour versus 102.1 pounds/hour. We will also have a 22 pounds/hour cushion between projected and allowed to cover unforeseen conditions.

C. Energy savings of 3600 horsepower, 3,000 therms/day of natural gas and steam reduction of 12,800 pounds/hour helps in our overall energy reduction requirements and saves \$75,000 to \$125,000 in cost each year.

D. A major advantage to this revised plan is the in-plant dust control system which will reduce fire/explosion hazards. Realizing that we cannot completely eliminate these hazards, we can reduce the potentials and have immediate response to a fire or explosion. Controlling a problem at its source will eliminate damage to other plant systems and/or minimize upset condition times.

9

COMPLIANCE APPROACH (ORIGINAL AND REVISED)

E. Maintenance cost will be reduced \$30,000 to \$90,000 per year as a result of process simplification. Less maintenance required and less possibility of breakdown allows greater assurance that emission levels will be maintained.

COMPARING CONTROL ACTIONS (ORIGINAL/REVISED) PLANS

<u>SYSTEM TO BE CONTROLLED</u>	<u>ORIGINAL</u>	<u>REVISED</u>
1. Hog - Particleboard Trim (PB-1)	No change (on schedule)	No change (on schedule)
2. Hog - Plywood Trim (PB-9)	No change (on schedule)	No change (on schedule)
3. Fan 3000 (PB-29)	Aerodyne collector	Now eliminate by using mechanical conveyor
4. North End Cleanup (PB-6)	No change (completed)	No change (completed)
5. All Bauers (PB-21-25)	Hold for possible elimination	Will eliminate
6. Buttner (PB-28)	No change (completed)	No change (completed)
7. MEC #1 (PB-26)	Aerodyne collector - held project pending dryer location change	Dryer location same location - Two Aerodynes ordered 10/19/73. Completion 3/15/74.
MEC #2 (PB-27)	No change (completed)	No change (completed)
8. Truck Dump (PB-30)	No change	Equipment on order, completion date delayed from 12/31/73 to 2/15/74.
9. Particle Storage (In-Plant Dust Control)	No change	Equipment on order, completion date delayed from 12/31/73 to 2/15/74.
10. Plant Modernization	Not planned	See comments elsewhere in this

Recd LRAHA
11/2/73
BW



Weyerhaeuser Company

P.O. Box 275
Springfield, Oregon 97477
A/C 503 • 746-2511

October 31, 1973

Mr. Verner J. Adkison
Lane Regional Air Pollution Authority
16 Oakway Mall
Eugene, Oregon 97401

Dear Mr. Adkison:

Subject: Board Products Compliance Variance Request

In accordance with provisions of Section 23, Lane Regional Air Pollution Authority Rules and Regulations, we are at this time requesting a variance to our board products compliance schedule to December 31, 1974.

- I. Since establishing our compliance program, we have had to deal with several critical problems, the latest of which is the energy crisis. Additionally, with this major pollution control program, we have had to take a critical look at our production process. For a considerable period of time, we were working under the assumption that allowed emissions were greater than those now allowed by our permit.
- II. Having just completed a revised process and control program, we feel that our new approach has many advantages, some of which are:
 1. Environment
 - a. Reduces total emissions over previously planned level.
 - b. Reduces total present emission points by 12 and adds five with only one with measurable emissions.
 - c. Reduces annual energy use.
 2. Weyerhaeuser
 - a. Increase productivity
 - b. Reduce product costs
 - c. Reduce natural gas and electrical demands
 - d. Improve our product

October 31, 1973

III. In Attachment I, we have listed:

1. Each emission source with remarks and estimated completion dates.
2. Estimated level of emissions at three-month increments starting with October 1973 through December 1974.

IV. A review of Attachment I shows that we plan to reduce present emissions of 466.2 pounds/hour to less than 81.9 pounds/hour authorized. Further, our largest emission point (PB-26) reduction from 195 pounds/hour to near 10 pounds/hour will take place in March 1974.

V. In Attachment II, we have listed a summary of actions that we have taken to show our continued efforts in this compliance program. I have assigned the following key personnel to this revised project:

1. Planning Manager - Coordinates with corporate personnel at Tacoma. Reports to me progress and critical problem areas.
2. Project Engineer - Retained from an outside engineering firm who will be supported by our local engineering group.
3. Environmental Coordinator - Process notice of constructions/completions, prepare progress reports and assist as needed.
4. Plant Superintendent - Provide full support to all activities of this project.

VI. If desired, we will provide working space for your reviewing engineer here at the plantsite. At your request, we will present a full formal briefing of our entire modernization and related control plan to you and your staff and/or members of Lane Regional Air Pollution Authority Board of Directors.

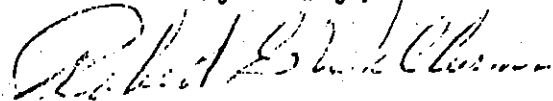
VII. In conclusion, an extension to our compliance date to December 31, 1974 would allow us to achieve full compliance. At a cost approaching two million dollars, we not only modernize our facilities but bring about a level of emissions below established standards and further reduce our energy requirements.

Verner J. Adkison
Page 3

October 31, 1973

We are committed to comply with Lane Regional Air Pollution Authority's standards and we now ask for the additional time to accomplish our common objectives.

Yours very truly,



Robert G. Williams
Wood Products Manager

dr
Enclosures

CONTROL UNITS (PARTICLEBOARD PLANT) - BOARD PRODUCTS COMPLIANCE

I.	UNIT	11/73 Existing Process	REMARKS	ESTIMATED COMPLETION
	PB-1	8.1	A Higher efficiency cyclone	01/01/74
	PB-2	12.5	- Deleted	-
	PB-3	2.9	2.9 No change INTERUP	-
	PB-4	2.3	2.3 No change	-
	PB-5	0.8	0.8 No change	-
	PB-6	0.3	0.3 No change INT	-
	PB-7	0.2	0.2 No change INT	-
	PB-8	0.1	0.1 No change INT	-
	PB-9	26.9	6.9 Higher efficiency cyclone	01/01/74
	PB-10	2.1	- Deleted	-
	PB-11	1.5	- Will be deleted	01/01/75
	PB-12	0.2	0.2 No change	-
	PB-13	0.1	- Will be deleted	01/01/75
	PB-14	0.7	- Will be deleted	01/01/75
	PB-15	0.2	- Baghouse control	03/15/74
	PB-16	0.4	0.4 No change	-
	PB-17	4.2	2.6 No change BOUND DUMP	-
	PB-18	0	0 Baghouse control	03/15/74
	PB-19	6.8	0 Will be deleted /MAY REMAIN	01/01/75
	PB-20	8.0	7.2 Possible deletion	01/01/75
	PB-21	11.7	- Will be deleted	01/01/75
	PB-22	8.0	- Will be deleted	01/01/75
	PB-23	30.7	- Will be deleted	01/01/75
	PB-24	30.7	- Will be deleted	01/01/75
	PB-25	36.7	- Will be deleted	01/01/75
	PB-26	19.5	10 Aerodyne collector	03/15/74
	PB-27	10	10 No change	-
	PB-28	34.6	6.9 No change	-
	PB-29	62.2	0 Will be deleted	07/01/74
	PB-30	NA	0 Enclosing truck dump	02/15/74
	PB-31	0.2	0.2 No change	-

CONTROL UNITS (PARTICLEBOARD PLANT) - BOARD PRODUCTS COMPLIANCE

I.	UNIT	REMARKS	ESTIMATED COMPLETION
	PB-32	No change	-
	PB-33	No change	-
	PB-34	No change	-
	PB-35	Baghouse also controls PB-15, PB-18, PB-30	02/15/74
NEW	PB-36	New first-stage dryer.	10/01/74
	PB-37	Baghouse, new dust burner system collector	10/01/74
	PB-38	Baghouse, surface system silo (2) to MEC 2	07/01/74
	PB-39	Second truck dump	07/01/74
	510.7	59.8	

II. EMISSION LEVEL RECAP - POUNDS/HOUR

Jan 1, 73	Oct 1, 73	Jan 1, 74	Apr 1, 74	Jul 1, 74	Oct 1, 74	Jan 1, 75
510.7	below 470	below 450	below 260	below 200	below 200	below 82

HISTORY OF ACTIONS TAKEN TO COMPLY WITH BOARD PRODUCT STANDARDS

July 9, 1971

Corporate research meeting on board products emissions.

September 30, 1971

Receipt of LRAPA regulations.

May 6, 1972

Test of control equipment.

May 26, 1972

Compared standards with actual emissions.

June 19, 1972

Pollution abatement meeting

June 27, 1972

Particulate emissions inventory by environmental research group in Longview, Washington

June 29, 1972

Compliance schedule to LRAPA

June 30, 1972

Cost estimates for second-stage Bauer dryers controls

July 14, 1972

Abatement requirements for 1973 budget approved

September 12, 1972

Meeting to set up action plans for compliance

October 10, 1972

Engineering check on cyclones

November 29, 1972

Planned reductions to 123.1 pounds/hour

Note: From this point in time to August 1973, the following planned actions were geared for 123.1 pounds/hour which had been determined as allowed in the complex approach.

November 30, 1972

Control plan check with Corporate Headquarters

HISTORY OF ACTIONS TAKEN TO COMPLY WITH BOARD PRODUCT STANDARDS

January 11, 1973

Inspection of Aerodyne units for possible use

January 12, 1973

Established local guidelines

January 25, 1973

Testing of control units PB-11, PB-12 and PB-31

January 31, 1973

Meeting on established guidelines for compliance

January 31, 1973

Corporate visit on compliance progress

February 6, 1973

Ordered Aerodyne unit for PB-28 which would reduce emissions from 34.6 pounds/hour to 6.9 pounds/hour for this source.

February 22, 1973

Requested assistance from Corporate Headquarters

February 27, 1973

Appropriation Request \$601,605 for control program

May 14, 1973

Aerodyne for PB-28 installed

May 22, 1973

Aerodyne tested

May 25, 1973

Considered elimination of Bauers

June 1, 1973

Engineering status report on Aerodyne unit for possible additional use.

July 14, 1973

Managers' meeting at Corporate Headquarters concerning problem areas.

Note: Again, all actions taken above were with the understanding that we were controlling emissions to 123.1 pounds/hour.

HISTORY OF ACTIONS TAKEN TO COMPLY WITH BOARD PRODUCT STANDARDS

July 1973 to August 1973

1. Draft copy of permit was reviewed. In reviewing, we noted allowed emissions were 72 pounds/hour for particleboard and 26.3 pounds/hour for plywood and Ply-Veneer. Under the total complex approach, then only 98.3 pounds/hour would be allowed. Our engineering and monies authorized would only achieve 102.1 pounds/hour and not bring us into compliance.
- ✓ 2. We also learned that the complex approach of total emissions would not be allowed by LRAPA.
- ✓ 3. With our planned program not acceptable, a decision to consider modernizing the particleboard plant to include controls which would meet the standards was made.
4. Our efforts starting in August 73 have been to meet authorized emissions as we now know them.

August 2, 1973

Report of outside consulting engineers on their visit of July 19, 1973 to modernize and control plant.

August 23, 1973

Submitted status report which reported the following concerning compliance program.

Particleboard Plant - The following action has been taken or is planned.

1. Eliminated cyclone (PB-10) from air separator No. 1 to particleboard storage. Completed prior to July 1, 1973.
2. Installed an Aerodyne collector to cyclone (PB-28) from Buttner dryer to shaker screen. Placed in operation August 19, 1973.
3. Adding a new Carter Day (24RJ84) baghouse to cyclone PB-15, which handles planer shavings. Also increasing flow rate to cyclone PB-15. Estimated completion December 31, 1973.
4. Replacing damaged cyclone (PB-31) which fell through the roof. Estimated completion August 23, 1973.
5. Replaced dual fan and duct system on cyclone (PB-19) with one fan and duct. Completed prior to July 1, 1973.
6. Will install necessary equipment to control emissions from the truck dump area. Target date of completion December 31, 1973.

HISTORY OF ACTIONS TAKEN TO COMPLY WITH BOARD PRODUCT STANDARDS

7. Expect to install an Aerodyne high-energy collector on cyclone (PB-26) MEC No. 1 which is our largest emission point source (195 pounds/hour -- 608.4 tons/year). Estimated completion February 23, 1974.
8. Eliminated cyclone (PB-2), a negative air cyclone for Pallman to conveyor No. 1. Completed prior to July 1, 1973.

Summarizing the above, our intent is to reduce emissions and comply with the air discharge permit. However, a problem area has developed which is as follows:

1. The control strategy in our schedule of compliance, dated June 29, 1972, at an estimated cost of \$601,605, was based on the understanding that allowed emissions in the particleboard, plywood/Ply-Veneer, and vinyl plants totaled 123.1 pounds/hour. The air discharge permit allows 98.3 pounds/hour. We have asked that allowed emissions in the permit be reviewed.
2. A complete modernization of the particleboard plant has been proposed which makes our original compliance plan obsolete. The modernization plan as proposed at an expenditure near \$2.0 million would reduce present emission points by six (6) and reduce emissions to less than in the original plan for compliance.
3. We expect to request a variance pursuant to Section 23 of the regulations in the near future, to allow additional time to carry out the modernization plan and to be in full compliance with the regulations.

August 27, 1973

Letter to LRAPA on authorized emission as contained in permit.

Note: We are now only concerned with particleboard plant emissions with the board products compliance schedule. We are allowed 81.9 pounds/hour and our present estimates are well within the standards.

September 4, 1973

Completion of damaged cyclone PB-31.

September 5, 1973, to present.

Series of meetings and actions to start moving without delay on our present modernization and control plan.



Weyerhaeuser Company

P.O. Box 275
Springfield, Oregon 97477
A/C 503 • 746-2511

November 16, 1973

Mr. Verner J. Adkison
Lane Regional Air Pollution Authority
16 Oakway Mall
Eugene, Oregon 97401

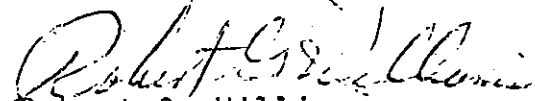
Dear Mr. Adkison:

Subject: Board Products Compliance Variance Request

In response to your letter of November 5, 1973, the attached additional information is provided as requested.

We await your contact in regards to your staff recommendations and the date this matter will be presented to your Board.

Sincerely yours,


Robert G. Williams
Wood Products Manager

dr
Attachments

RECEIVED
NOV 20 1973

LANE REGIONAL AIR POLLUTION AUTHORITY

REASONS FOR OVERSHOOTING ORIGINAL SCHEDULE DATE
AND WHY BOARD SHOULD ALLOW ADDITIONAL TIME

RECEIVED
NOV 20 1973

LANK HESTON AIR POLLUTION AUTHORITY

Allowed Emissions

In May 1972 at the Corporate level, a determination of allowed emissions was made based on the manufacturing complex approach. While reviewing the draft copy of our air discharge permit in August 1973, we noted allowed emissions were less than planned and further that the manufacturing complex approach was not acceptable. Our compliance schedule and authorized expenditures would not reduce emissions to the level required in the discharge permit.

Why then are we not now at the emission level of our compliance schedule? The then coming energy crisis and the desire to modernize the particleboard plant caused an action hold to be implemented in August 1973 while details of a revised plan were worked out.

Energy Crisis

The addition of original planned control equipment would have required an additional 600 horsepower to operate equipment. With a 10% electrical usage cutback, we would have had to curtail operations within the plant resulting in employee layoffs along with loss production and taxing revenue. Please keep in mind that the revised plan saves 3600 horsepower of electrical usage and reduces natural gas usage by 3000 therms/day and finally reduces steam usage by 12,800 pounds/hour.

Plant Modernization

As stated in our variance request, modernization of the plant allows all the advantages that are desired in reducing emissions, saving energy, maintaining payroll, and increasing production which further increases tax revenue.

REASONS FOR OVERSHOOTING ORIGINAL SCHEDULE DATE
AND WHY BOARD SHOULD ALLOW ADDITIONAL TIME

Summarizing

No one single factor caused us to overshoot our compliance date. As stated before, we are committed to comply with LRAPA standards. With our commitment in mind, it seems logical to us that with our present approach with all its advantages, the community and the company are best served by your Board allowing the additional time to complete our compliance program.

PARTICLEBOARD PLANT EMISSION LEVEL - PAST, PRESENT, AND PROJECTED DURING VARIANCE PERIOD

(Figures Represent Pounds/Hour - Authorized 81.9 Pounds/Hour)

<u>Unit</u>	<u>Jan 1, 73</u>	<u>Oct 1, 73</u>	<u>Jan 1, 74</u>	<u>Apr 1, 74</u>	<u>July 1, 74</u>	<u>Oct 1, 74</u>	<u>Jan 1, 75</u>
PB- 1	8.1	8.1	4.0	4.0	4.0	4.0	4.0
PB- 2	12.5	-	-	-	-	-	-
PB- 3	2.9	2.9	2.9	2.9	2.9	2.9	2.9
PB- 4	2.3	2.3	2.3	2.3	2.3	2.3	2.3
PB- 5	0.8	0.8	0.8	0.8	0.8	0.8	0.8
PB- 6	0.3	0.3	0.3	0.3	0.3	0.3	0.3
PB- 7	0.2	0.2	0.2	0.2	0.2	0.2	0.2
PB- 8	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PB- 9	26.9	26.9	6.9	6.9	6.9	6.9	6.9
PB-10	2.1	-	-	-	-	-	-
PB-11	1.5	1.5	1.5	1.5	1.5	1.5	-
PB-12	0.2	0.2	0.2	0.2	0.2	0.2	0.2
PB-13	0.1	0.1	0.1	0.1	0.1	0.1	-
PB-14	0.7	0.7	0.7	0.7	0.7	0.7	-
PB-15	0.2	0.2	0.2	0.0	0.0	0.0	0.0
PB-16	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PB-17	4.8	2.6	2.6	2.6	2.6	2.6	2.6
PB-18	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB-19	6.8	6.8	6.8	6.8	6.8	6.8	-
PB-20	8.0	8.0	8.0	8.0	8.0	8.0	7.2
PB-21	11.7	11.7	11.7	11.7	11.7	11.7	-
PB-22	8.0	8.0	8.0	8.0	8.0	8.0	-
PB-23	36.7	36.7	36.7	36.7	36.7	36.7	-
PB-24	36.7	36.7	36.7	36.7	36.7	36.7	-
PB-25	36.7	36.7	36.7	36.7	36.7	36.7	-
PB-26	195.0	195.0	195.0	10.0	10.0	10.0	10.0
PB-27	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PB-28	34.6	6.9	6.9	6.9	6.9	6.9	6.9
PB-29	62.2	62.2	62.2	62.2	-	-	-
PB-30	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB-31	0.2	0.2	0.2	0.2	0.2	0.2	0.2

PARTICLEBOARD PLANT EMISSION LEVEL - PAST, PRESENT, AND PROJECTED DURING VARIANCE PERIOD
 (Figures Represent Pounds/Hour - Authorized 81.9 Pounds/Hour)

<u>Unit</u>	<u>Jan 1, 73</u>	<u>Oct 1, 73</u>	<u>Jan 1, 74</u>	<u>Apr 1, 74</u>	<u>July 1, 74</u>	<u>Oct 1, 74</u>	<u>Jan 1, 75</u>
PB-32	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB-33	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB-34	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB-35	-	-	-	0.0	0.0	0.0	0.0
PB-36	-	-	-	-	-	5.0	5.0
PB-37	-	-	-	-	-	0.0	0.0
PB-38	-	-	-	-	0.0	0.0	0.0
PB-39	-	-	-	-	0.0	0.0	0.0
Total	510.7	466.2	442.1	256.9	194.7	199.7	60.0

Projections were made on known emission rates (testing) and data supplied and/or indicated by equipment vendors. In the latter, a review by our engineers confirms the projected figures to be representative of the capabilities of the control equipment.

COMPLIANCE APPROACH (ORIGINAL AND REVISED)

Original Plan

Called for the adding on of such control equipment as baghouses, Aerodyne collectors, and cyclones. This plan did nothing for the reduction of energy and/or production process.

Revised Plan (see attached flow chart)

A. Objectives:

1. Meet and better emission standards
2. Reduce energy demand
3. Reduce fire and explosion hazards
4. Increase press productivity and efficiency
5. Reduce variable cost of production
6. Improve product

B. As reported elsewhere in this report, our projected emission level is 60 pounds/hour versus 102.1 pounds/hour. We will also have a 22 pounds/hour cushion between projected and allowed to cover unforeseen conditions.

C. Energy savings of 3600 horsepower, 3,000 therms/day of natural gas and steam reduction of 12,800 pounds/hour helps in our overall energy reduction requirements and saves \$75,000 to \$125,000 in cost each year.

D. A major advantage to this revised plan is the in-plant dust control system which will reduce fire/explosion hazards. Realizing that we cannot completely eliminate these hazards, we can reduce the potentials and have immediate response to a fire or explosion. Controlling a problem at its source will eliminate damage to other plant systems and/or minimize upset condition times.

COMPLIANCE APPROACH (ORIGINAL AND REVISED)

E. Maintenance cost will be reduced \$30,000 to \$90,000 per year as a result of process simplification. Less maintenance required and less possibility of breakdown allows greater assurance that emission levels will be maintained.

F. Changes to Sawdust System:

1. Addition of second truck dump for sawdust receipt bay from outside.
2. Add conveying system along east wall of new storage building for entry to existing sawdust bay.
3. Continue existing internal sawdust storage and receipt through (PB-31) sawdust blower system.
4. Use existing sawdust feed bin system.
5. Material flow up existing bucket elevator and add conveyor to new sawdust primary dryer located on north end of particle preparation building.
6. Dryer outfeed to existing screening facility.
 - 35 mesh burn in dryer
 - 14 + 35 acceptable surface material
 - +14 return to storage as core material
7. Acceptable surface material to flow either:
 - a) through Bauer 418 refines, or
 - b) bypass Bauers and flow directly to surge bin.
8. Material from Bauers or bypass to be metered from surge bin to MEC II infeed.
9. MEC II outfeed mechanically conveyed to Line 1 and 2 surge bin.

G. Changes to Shavings System:

1. Use of existing truck dump for shavings and ply-trim receipt.

COMPLIANCE APPROACH (ORIGINAL AND REVISED)

2. All shavings infeed to be screened and classified.
 -14 to outside surface silo storage
 +14 mesh to inside core storage
3. Continue to receive internal planer shavings through existing rader system (PB-15). Screen and classify material same as truck dump receipts.
4. Use existing material feed bins for core material introduction.
5. Material to flow from bins to rock/metal separators.
6. Flow conveyed to Pallman flakers then to existing core dryers -- the Buttner and MEC I.
7. Flow to merge on feed of dryers and mechanically conveyed core material to Line 1 and 2 surge storage.
8. Surface classified fines (-14 mesh) stored outside silo conveyed to infeed of MEC II and introduced with sawdust fines.
9. Surface material outfeed flow from MEC II same as described in sawdust flow.

H. Changes to Particleboard Hogged E&E Trim and Ply-Trim:

1. Receive these material sources through existing internal blower system and ply-trim from outside sources through existing truck dump.
2. Material screened and classified same as shavings.
3. Old storage building is storage and feedsite for this material.
4. Material introduced through existing feed bins and metered to Buttner and MEC I Pallman flaker system.
5. Material flow continues the same as shavings core material.

COMPARING CONTROL ACTIONS (ORIGINAL/REVISED) PLANS

<u>SYSTEM TO BE CONTROLLED</u>	<u>ORIGINAL</u>	<u>REVISED</u>
1. Hog - Particleboard Trim (PB-1)	No change (on schedule)	No change (on schedule)
2. Hog - Plywood Trim (PB-9)	No change (on schedule)	No change (on schedule)
3. Fan 3000 (PB-29)	Aerodyne collector	Now eliminate by using mechanical conveyor
4. North End Cleanup (PB-6)	No change (completed)	No change (completed)
5. All Bauers (PB-21-25)	Hold for possible elimination	Will eliminate
6. Buttner (PB-28)	No change (completed)	No change (completed)
7. MEC #1 (PB-26)	Aerodyne collector - held project pending dryer location change	Dryer location same location - Two Aerodynes ordered 10/19/73. Completion 3/15/74.
MEC #2 (PB-27)	No change (completed)	No change (completed)
8. Truck Dump (PB-30)	No change	Equipment on order, completion date delayed from 12/31/73 to 2/15/74.
9. Particle Storage (in-Plant Dust Control)	No change	Equipment on order, completion date delayed from 12/31/73 to 2/15/74.
10. Plant Modernization	Not planned	See comments elsewhere in this report.

Lane
Regional

AIRPORT ROAD - ROUTE 1, BOX 739
EUGENE, OREGON 97402
PHONE: (503) 689-3221

AIR
POLLUTION
AUTHORITY

VERNER J. ADKISON
Program Director

BOARD OF DIRECTORS

NANCY HAYWARD
Lane County
DARWIN COURTRIGHT
Springfield
WICKES BEAL
Eugene
GERALD CATES
Cottage Grove
GUS KELLER
Eugene

November 5, 1973

Mr. Robert Williams
Weyerhaeuser Company
P.O. Box 275
Springfield, Oregon 97477

RE: PROPOSED BOARD PRODUCTS VARIANCE REQUEST

Dear Mr. Williams:

Your request for a variance dated October 31, 1973 has been reviewed by this agency. Prior to presenting this request to the LRAPA Board of Directors for action, the following additional information is required.

- 1). Address fully the reasons for overshooting the original compliance schedule dates and why the Board should allow additional time to meet compliance.
- 2). Provide a detailed control plan showing mileposts of action for each phase of control.
- 3). Supply emission estimates for each emission point indicating present and future emissions. Indicate how these projections were made and what action will be undertaken to assure compliance will be achieved and maintained.
- 4). Compare the control actions you have undertaken in relationship to the original compliance schedule. Explain major deviations from this schedule and why the now anticipated emissions are so much greater for the end of this year than originally anticipated.

Upon response to the above questions, you will be contacted and appraised of the staff recommendations to the Board and the date at which this matter will be presented to the Board.

Sincerely,

VJA 11/6/73 - delivered
Verner J. Adkison
Director

VJA:mo

M I N U T E S

LANE REGIONAL AIR POLLUTION AUTHORITY

BOARD MEETING

THURSDAY - DECEMBER 13, 1978

The meeting was called to order at 12:25 p.m. by Chairperson Nancy Hayward in the conference room of the agency offices.

ROLL CALL

Board: Nancy M. Hayward, Chairperson - Lane County; Gus Keller - City of Eugene; Wickes Beal - City of Eugene; Gerald Cates - City of Cottage Grove. (ABSENT: Darwin Courtright - City of Springfield)

Staff: Verner J. Adkison - Director; Joseph A. Lassiter - Program Administrator; Joseph B. Richards - Legal Counsel; Paul Willhite, Dave Gemma, Millie Watson.

Visitors: Paul Hellwege & Hal McCall - Bohemia, Inc.; Jerry Harper & Dick Crabb - Weyerhaeuser Company; Linda Meierjurgan - Springfield News; Neal Rosen - Eugene Register-Guard

MINUTES:

Wickes Beal MOVED to approve the minutes for November. Gus Keller SECONDED and the motion was APPROVED.

EXPENSE REPORT:

Wickes Beal MOVED to approve the expense report for November. Gus Keller SECONDED and the motion was APPROVED.

PUBLIC INFORMATION DISCLOSURE ACT:

Mr. Richards explained the new Public Information Disclosure Act which went into effect on July 1, 1973. He said that all written information in the agency is considered public information except trade secrets or something which might be an unreasonable disclosure that would jepordize an individual. When anything of this nature is requested they should be checked with legal counsel before giving out the information. He recommended that each case be treated individually.

PARKING STRUCTURES:

Mr. Willhite presented a request from Weyerhaeuser Company of Springfield for a permit to construct 164 parking spaces at a new office building. The

spaces would replace existing spaces at the present office buildings and would not increase the total number of parking spaces now being used.

Gus Keller MOVED to approve construction of 164 parking spaces at the new location. Gerald Cates SECONDED and the motion was APPROVED.

DIRECTOR'S REPORT:

Weyerhaeuser Company Variance:

Mr. Willhite explained that on January 10, 1973 the Board had approved a compliance schedule for the Weyerhaeuser Company of Springfield to meet emission regulations on Board Products operations by December 31, 1973. The company has made every effort to meet the emissions limits by the appointed date but delivery of equipment, both production and control, makes it impossible to do so. The plant modernization has already been initiated and is proceeding as rapidly as possible and the agency has received construction notices as required in the initiation of this process modification. The Weyerhaeuser Company is now requesting an extension of the date on the compliance schedule to December 31, 1974 at which time they feel the modernization should be completed.

The Director's recommendation was to extend this compliance schedule on the following conditions: 1) The company shall submit bi-monthly status reports indicating progress achieved in it's control program as outlined in it's control plan schedule. 2) The company shall undertake all practicable means to achieve an early compliance. 3) The company shall conduct emission source tests in accordance with approved Authority procedures within the time scheduling as required by the Agency. 4) A summary of all emissions test for all sources shall be developed in accordance with requirements of the Agency.

Mr. Willhite reported that the Weyerhaeuser Company has agreed to the above conditions.

Gus Keller MOVED to approve a variance to modify the compliance schedule to the date of December 31, 1974 for completion. Gerald Cates SECONDED and the motion was APPROVED.

Bohemia, Incorporated - Cascade Fiber Company Variance:

The Board was informed by Mr. Willhite that on January 10, 1973 a compliance schedule for Cascade Fiber Company with a final completion date of December 31, 1973 had been approved by the Board of Directors. The company is now requesting an extension of twelve months until December 31, 1974 to meet the emission standards of their particleboard operations.

The reasons for this request is presented by the company as follows: 1) In an endeavor to find a solution to the emissions from the material dryers, a continuing evaluation of control possibilities has been undertaken. The control opportunities available did not appear to adequately solve the problem. 2) The company is now proceeding as rapidly as possible to control emissions

from the dryers through a combustion source and 100% recycle. However, the arrival of equipment appears to prohibit the actual start-up of controls until March, 1974. 3) The company has currently achieved a substantial amount of control and, with additional control as anticipated by the end of 1974, the company would reduce their emissions by 89% from the original amount.

Mr. Willhite added that Bohemia has taken many major steps to alleviate the dust problems at their facility and it is felt their approach to install a baghouse on the remaining dust emission source and the installation of heat recovery burners on the dryers provides an adequate means of control while reducing any adverse impact on the area and that the staff recommendation is that the extension be granted for twelve months as requested by the company. It was further recommended that the company be required to submit source test data in accordance with the Agency procedures as part of the March 1974 evaluation and upon subsequent control equipment installations. Mr. Hal McCall who was present, agreed to these conditions.

Wickes Beal MOVED to approve a variance to modify the compliance schedule to the date of December 31, 1974 for completion. Gerald Cates SECONDED and the motion was APPROVED.

Mr. Adkison informed the Board that the variances will be presented at the next meeting for signature by the Chairperson.

DEQ CONTRACT WITH THE AGENCY:

Mr. Lassiter reported that the contract is ready for approval by the Board of Directors and explained the terms as presented to the Department of Environmental Quality. He reported that the Department has tentatively approved the terms as presented and Board approval is required in order to present the contract to the Environmental Quality Commission at their next meeting in Eugene on Monday, December 17th for their formal approval.

It is felt that the terms of the contract are very favorable to the Lane Regional Air Pollution Authority. There will be a total of nine persons employed by the Department who will be housed in the Agency offices and it is planned to have a total of sixteen Agency personnel. Some of the Agency personnel will be performing work for the Department and the money received for these services will be used to hire the additional persons needed to adequately perform the duties required.

Mrs. Beal stated that she felt this was an honor to the Agency as this concept has never been tried by any other State Environmental Agency and that she was very proud of the staff. The entire Board agreed with this statement.

Cerald Cates MOVED to approve the contract as presented. Gus Keller SECONDED and the motion was APPROVED.

ADJOURNMENT:

There being no further business to come before the Board, the meeting was adjourned at 1:45 P.M.

Respectfully submitted,
Millie Watson
Millie Watson
Recording Secretary



ENVIRONMENTAL QUALITY COMMISSION

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

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Chairman, McMinnville

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Portland

MORRIS K. CROTHERS
Salem

ARNOLD M. COGAN
Portland

DIARMUID F. O'SCANNLAIN
Director

MEMORANDUM

To : Environmental Quality Commission

From : Director

Subject : Agenda Item No. J, January 25, 1974 EOC Meeting
Public Hearing to Adopt Criteria for Certification of
Motor Vehicle Pollution Control Systems

Background

The 1971 Oregon Legislative assembly enacted a series of laws which established requirements for a motor vehicle emission control inspection program. This legislation does not set detailed requirements upon program criteria and standards, but rather authorizes and directs the commission to establish these specific requirements. Detail changes to this series of laws were enacted during the last Legislative Assembly by means of Senate Bill 77. Additional changes are being sought.

Basically, legislation currently requires that vehicles registered in counties designated by the commission must obtain a completed Certificate of Compliance prior to registration renewal. The commission has, under provision of ORS 481.190, designated the counties of Clackamas, Multnomah, and Washington. Amongst vehicles exempt from this registration requirement are those for which a certified system has not been designated. The commission is directed by ORS 449.953 to issue Certificates of Approval for classes of motor vehicle pollution control systems which meet the criteria adopted by the commission. The commission is also to designate those classifications of motor vehicles for which certified systems are available.

Oregon revised statute 449.949 (4) reads as follows: " "Motor vehicle pollution control system" means equipment designed for installation on a motor vehicle for the purpose of reducing the pollutants emitted from the vehicle, or a system or engine adjustment or modification which causes a reduction of pollutants emitted from the vehicle."

Oregon's transportation control strategy, as submitted by Governor McCall, has been approved by the Environmental Protection Agency. Included as part of this control plan is a vehicle emission control program based upon inspection and emission maintenance of motor vehicles. A retrofit requirement, that is, a requirement for addition of pollution control equipment to motor vehicles, is included in the control plan for initiation during 1975 if it is determined that the inspection/maintenance program is not achieving projected results.

Discussion

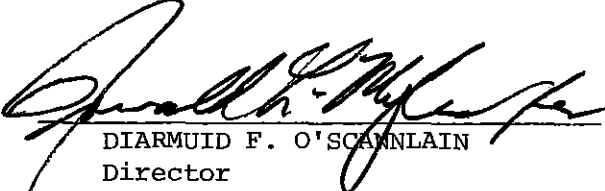
There appears to be considerable public interest in the question of retrofitting pollution control equipment to older cars. The vehicle emission control program approved by the commission, submitted to Environmental Protection Agency by the Governor, and approved by EPA, does not necessitate retrofit unless the inspection/maintenance program is unable to achieve projected results.

It is proposed that the commission initially adopt criteria which would preclude approval of retrofit devices as certified systems. Commission action on additional proposed criteria, and for designations of motor vehicle classes, will be sought during the first quarter of 1974. If it is determined that a retrofit program is required to comply with the requirements of the Implementation Plan, then commission action will be sought during 1975.

The Department has prepared proposed initial criteria for certification of motor vehicle pollution control systems under provisions of ORS 449.953(1).

Recommendation

It is the Director's recommendation that following the public hearing and upon consideration of the testimony presented, the proposed initial criteria for certification of motor vehicle pollution control systems be adopted by rule pursuant to ORS 449.953.


DIARMUID F. O'SCANNLAIN
Director

RCH:pf
1/16/74

PROPOSED CRITERIA FOR CERTIFICATION OF
MOTOR VEHICLE POLLUTION CONTROL SYSTEMS

24-200 Criteria for certification of Motor Vehicle Pollution Control System

Pursuant to the requirements of ORS 449.953(1), the following are the criteria for certification of motor vehicle pollution control systems as defined by ORS 449.949.

(1) A motor vehicle pollution control system which necessitates equipment designed for installation on a motor vehicle for the purpose of reducing the pollutants emitted from the vehicle shall not be certified.

(2) A motor vehicle pollution control system which necessitates modifications, other than adjustments, to the original design of the motor vehicle shall not be certified.

RCH:pf
1/16/74

S Shary

OK -
RM can
sign.

Director's Recommendation

It is the Director's recommendation that following the public hearing and upon consideration of the testimony presented, the proposed initial criteria for certification of motor vehicle pollution control systems be adopted by rule pursuant to ORS 468.375.

449.953. (C)

DFO'S

D:

I think this recommendation should be OK. The initial criteria and justification for them are spelled out in the staff memo but are not delineated in the recommendation--which gives room for consideration of public testimony by the Commission. The exclusion of retrofit devices at this time is consistent with the Portland Transportation Control Strategy, and the criteria are clearly identified as initial criteria.

SS



ENVIRONMENTAL QUALITY COMMISSION

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Chairman, McMinnville

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Portland

MORRIS K. CROTHERS
Salem

ARNOLD M. COGAN
Portland

DIARMUID F. O'SCANNLAIN
Director

MEMORANDUM

To : Environmental Quality Commission
From : Director
Subject: Agenda Item No. K, January 25, 1974 EQC Meeting
Benjamin Franklin Savings & Loan Association 100-Space
Temporary Parking Facility, Portland

Background

On December 20, 1973, the Department received an application from Benjamin Franklin Savings & Loan Association (hereinafter referred to as the applicant) to construct a 100-space parking facility in downtown Portland.

The proposed parking facility is to be located on the block bounded by S. W. Fourth Avenue, S. W. Mill Street, S. W. Fifth Avenue and S. W. Market Street. The site is on the block immediately south of the new triangular shaped condominium known as Portland Plaza and is vacant except for a small branch office of the applicant's. This area is within the jurisdictional boundaries of the Portland Transportation Control Strategy adopted by the Commission on May 29, 1973.

The Portland Planning Commission has granted the applicant permission to operate the proposed parking facility until December 31, 1974. The applicant obtained a building permit December 19, 1973.

The applicant is requesting approval from the Department to operate a 100 car parking facility for a period of one year ending on December 31, 1974 and subject to a one-year renewal if such approval is granted by the Portland Planning Commission.

Discussion

Under the provisions of Section 5 of the Portland Transportation Control Strategy, parking facilities proposed for construction in downtown Portland must meet the following criteria to receive approval for construction or operation:

1. The parking facility must not result in a net increase in the total supply of parking existing in downtown Portland as of



Contains
Recycled
Materials

May 29, 1973, effective June 1, 1975; and

2. The parking facility must be developed in conjunction with the construction of a new development to provide the minimum parking necessary to operate the development; or
3. The parking facility must provide short-term (noncommuter) parking to replace on-street and other parking spaces removed in accordance with the Downtown Plan or Transportation Control Strategy and must be a part of the Downtown Plan approved by the City Council.

The applicant proposes to meet the first criteria, of no net increase in parking supply, by replacing 100 of the 228 parking spaces temporarily removed at Pacific Northwest Bell during the construction of enlarged office facilities and a new parking structure. The construction at Bell Telephone is scheduled to be completed by the end of 1975; thus the applicant is requesting permission to temporarily operate the proposed parking facility until that time.

However, according to the information submitted by the applicant, the proposed parking facility will not satisfy either criteria 2 or 3. While the parking facility would replace 100 of the spaces temporarily lost at Pacific Northwest Bell, it is not primarily intended for Bell employees or for any new development in the area. Rather, it is intended to serve the general public on a first-come first-serve basis contrary to the requirements of criteria 2.

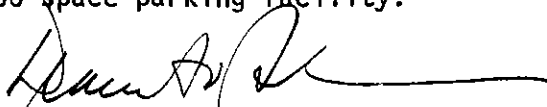
Further, according to City Center Parking, which will operate the parking facility for the applicant, it is anticipated that the facility will park cars in the ratio of 75% long-term (commuter) to 25% short-term. Thus, the proposed facility cannot be considered a short-term parking facility as required in criteria 3.

The overall effect of the proposed parking facility will be to encourage commuters to use their automobiles, rather than seeking alternative modes of transportation. This is totally inconsistent with a primary objective of the Transportation Control Strategy which is to encourage the commuter to utilize Tri-Met, car pooling or other forms of transportation.

Of all the types of trips made to downtown Portland, the commuter trip is the easiest to convert to alternative modes of transportation. Since the proposed parking facility does not provide assigned parking for those who absolutely need their automobiles on the job or for car pools; and since it is not intended to provide short-term parking to support retail business, the facility will be counterproductive to the effort to convert the single person auto commuter to the bus or car pools. Therefore, it is not consistent with the adopted criteria of the Portland Transportation Control Strategy.

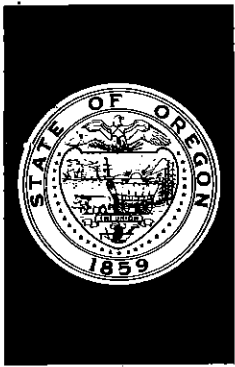
Recommendation

The Director recommends that the Commission issue an order denying the December 20, 1973 application of Benjamin Franklin Federal Savings & Loan Association for the 100-space parking facility.



DIARMUID F. O'SCANNLAIN
Director

1/17/74



DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED
DEC 20 1973

PARKING FACILITY/AIR QUALITY CONTROL NOTICE OF CONSTRUCTION AND APPLICATION FOR APPROVAL

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229- 5267

TOM McCALL
GOVERNOR

To Construct or Modify an Air Contaminant Source

DIARMUID F. O'SCANNLAIN
Director

(A letter of approval to construct must be obtained from the Department prior to construction. The Department may request an environmental impact statement or other information within 30 days of receipt of this application.)

Business Name: Benj. Franklin Federal Savings & Loan Assn. Phone: 248-1207

City block bounded by S. W.
Address of Premises: Market, Mill, 4th & 5th Streets City Portland Zip: 97201

Nature of Business: Savings and Loan Association

Responsible Person to Contact: Robert E. Downie Title: Sr. Vice Pres. & Treas.

Other Person Who May be Contacted: Virgil Rohm Title: Asst. Vice Pres.

Corporation Partnership Individual Government Agency

Legal Owner's Address: 517 S. W. Stark Street City: Portland Zip 97204

Description of Parking Facility and its Intended Use. (Please include 2 copies of Plot Plan showing parking space location and access to streets or roadways):

Please see letter and exhibits attached

Estimated Cost: Parking Facility Only: \$ 10,000.00 --site preparation and paving

Estimated Construction Date: Dec., 1973 Estimated Operation Date: Jan. 1, 1974

Name of Applicant or Owner of Business: Benj. Franklin Federal Savings & Loan Assn.

Title: Sr. Vice Pres. & Treas. Phone: 248-1207

Signature: *Robert E. Downie* Date: 12/20/73

Applicability: This Notice of Construction Requirement Pertains

1. To areas within five miles of the minicipal boundary of any city having a population of 50,000 or greater.
2. Any parking facility used for temporary storage of 50 or more motor vehicles or having two or more levels of parking for motor vehicles.

Date Received: _____ N/C Number _____



ROBERT E. DOWNIE
SR. VICE PRES. & TREAS.

Benj Franklin

FEDERAL SAVINGS AND LOAN ASSOCIATION
PORTLAND, OREGON

FRANKLIN BUILDING
S.W. 5TH & STARK
PHONE 248-1207

December 20, 1973

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

Attention: Mr. Mike Downs

Gentlemen:

For the last two years or so, Benj. Franklin Federal Savings and Loan Association has owned the full city block bounded by Southwest Market and Mill Streets and by Southwest Fourth and Fifth Avenues in Portland. A small branch of the association occupies the northwest corner of the block which will be operated at this location until approximately the end of 1975 by which time it is expected that the branch will be changed to permanent quarters within an office building in the immediate vicinity.

Until a few months ago, West Coast Business Investment, Ltd. operated a sales office and model of their condominium apartment in a temporary building on the eastern half of the block. Since that time the building has been vacant and is in the process of being removed from the block.

For the aforementioned two years, customers of each party have used the premises for parking although the surface was only gravelled. Previous to this period, the property was utilized as the home of St. Mary's School. When the buildings were removed, it was necessary to fill the lot so as to use it for the purposes mentioned above.

More than ten years ago, the association began planning for an office building in this area--originally on the block immediately west of the auditorium which was traded to the city at the city's request. Considerable time, effort and expense went into preliminary planning, each time to be modified and then abandoned due to changes in the Auditorium's requirements.

During this ten-year period, many changes have occurred with respect to downtown planning, mass transit and urban renewal. Until now, the situation was so fluid, the association dared not make long-range plans for this property. With the adoption of nearly-final arrangements for the Fifth-Sixth transit mall, an informal commitment to perimeter, long-range parking facilities and much-improved mass transit capabilities by 1975, we feel we can embark on a two-year plan concerning our position with respect to downtown Portland.

The association therefore hereby requests approval from you to operate a one-hundred car surface parking lot on the subject premises not occupied by their branch office. The lot would be paved, equipped with necessary catch basins and landscaped as required by the Design Committee including the retention of all trees and shrubs presently growing on the block. This approval is requested for a period of one year ending on December 31, 1974 and subject to a one-year renewal if such approval is granted by the Portland Planning Commission.

We request approval based on the specific reasons cited below:

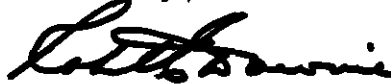
1. We understand that your policy will allow creation of parking places if no net increase of facilities results. It is also our understanding that 278 parking spaces are temporarily lost when Pacific Northwest Bell shut down their facilities and that replacement will not occur before the end of 1975, the latest date we intend to seek to operate the subject facility.
2. Under the foregoing reasoning, 233 parking places were removed from Southwest Market and Clay Streets. Apparently there is little chance the planned perimeter parking facility can be available before our facility would terminate.
3. The association has been bombarded with requests for parking, both short and long term. Erecting barricades to keep people out has not enhanced the image of the Benj. Franklin. This need applies as well to nighttime parking for Auditorium patrons.
4. We would like to receive a little income from this major property, at least as an offset to real estate taxes, during this planning period as we attempt to determine the best use for this property not only for ourselves but for the city as well.

We have secured the approval of the Portland Planning Commission for a one-year period ending December 31, 1974. They are to collect some parking data by that time and have requested the City of Portland to take a more active part in the creation of a parking authority. We were left with the feeling that the planning commission logically might have issued the permit for two years if a more definite parking plan had been available with which to compare our application. Copies of the Planning Commission's findings are attached.

Approval has been received from the City of Portland and copies of these documents are attached showing the endorsements of all necessary authorities. In this exhibit you will find copies of your required parking lot layout.

In view of the fact that our application to operate a 100-car parking lot appears to meet the Department of Environmental Quality parking standards; and, that the permit is of limited duration; and that all other interested authorities have approved it, we respectfully request your favorable recommendation and issue us a permit to operate either for two years or for one year subject to renewal if the city permits extension for one additional year.

Cordially,



Robert E. Downie
Sr. Vice Pres. & Treas.

RED:cgc

CITY OF PORTLAND
INTER-OFFICE CORRESPONDENCE
(NOT FOR MAILING)

December 12, 1973

From City Planning Commission
To Bureau of Buildings
Addressed to C. N. Christiansen, Buildings Inspections Director
Subject Downtown Plan Review #27 (Amended)

Dear Mr. Christiansen:

On November 6, 1973, the Planning Commission met and considered the following Downtown Plan Review:

Applicant: Benj. Franklin Savings and Loan Association,
deedholder

Downtown Plan Review: Parking

On Property legally described as: Lot 1 through 8, Block
151, City of Portland

In zone: M3

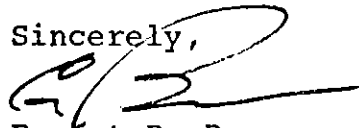
Located at: SW 4th and 5th between Market and Mill

The Commission action was as follows:

1. That the applicant be granted off-street parking for one year until December 31, 1974, during which time the following work will be performed:
 - a) A periodic inventory of both on and off-street parking will be conducted.
 - b) A Downtown Transportation and Parking Policy will be prepared for review by the Planning Commission within six months.
2. That all applicable City Codes regarding paving, curb cuts, etc. be met.
3. That screening be approved by the Design Committee Staff with special emphasis on preserving existing trees and wall.

Do not waive the 14-day waiting period.

Sincerely,



Ernest R. Bonner
Planning Director

ar

December 27, 1973

Benjamin Franklin Savings and Loan Association
 517 S. W. Stark Street
 Portland, OR 97204

Attn: Robert E. Downie
 Sr. Vice President & Treasurer

Re: Proposed Benjamin Franklin
 Federal Savings & Loan Assn.
 100-space parking facility,
 Portland

Gentlemen:

The Department has reviewed the information submitted with your December 20, 1973 application for construction of a 100-space temporary parking facility on the city block bounded by S. W. Market, Mill, 4th, and 5th Streets.

Before we can make a final evaluation of this facility, the following information must be submitted to the Department.

1. A break-down by short-term and long-term of the type of parking expected at the parking facility.
2. Evidence that the parking facility is needed on a temporary basis to replace the Bell Telephone parking lot which is under construction. In other words, is Bell Telephone losing any employees or business because their lot is temporarily shut? Or, is any other business in the area suffering because of the temporary closure of Bell Telephone's lot?

If you have any questions, please contact M. J. Downs of our Air Quality Division.

Very truly yours,

DIARMUID F. O'SCANNLAIN
 Director

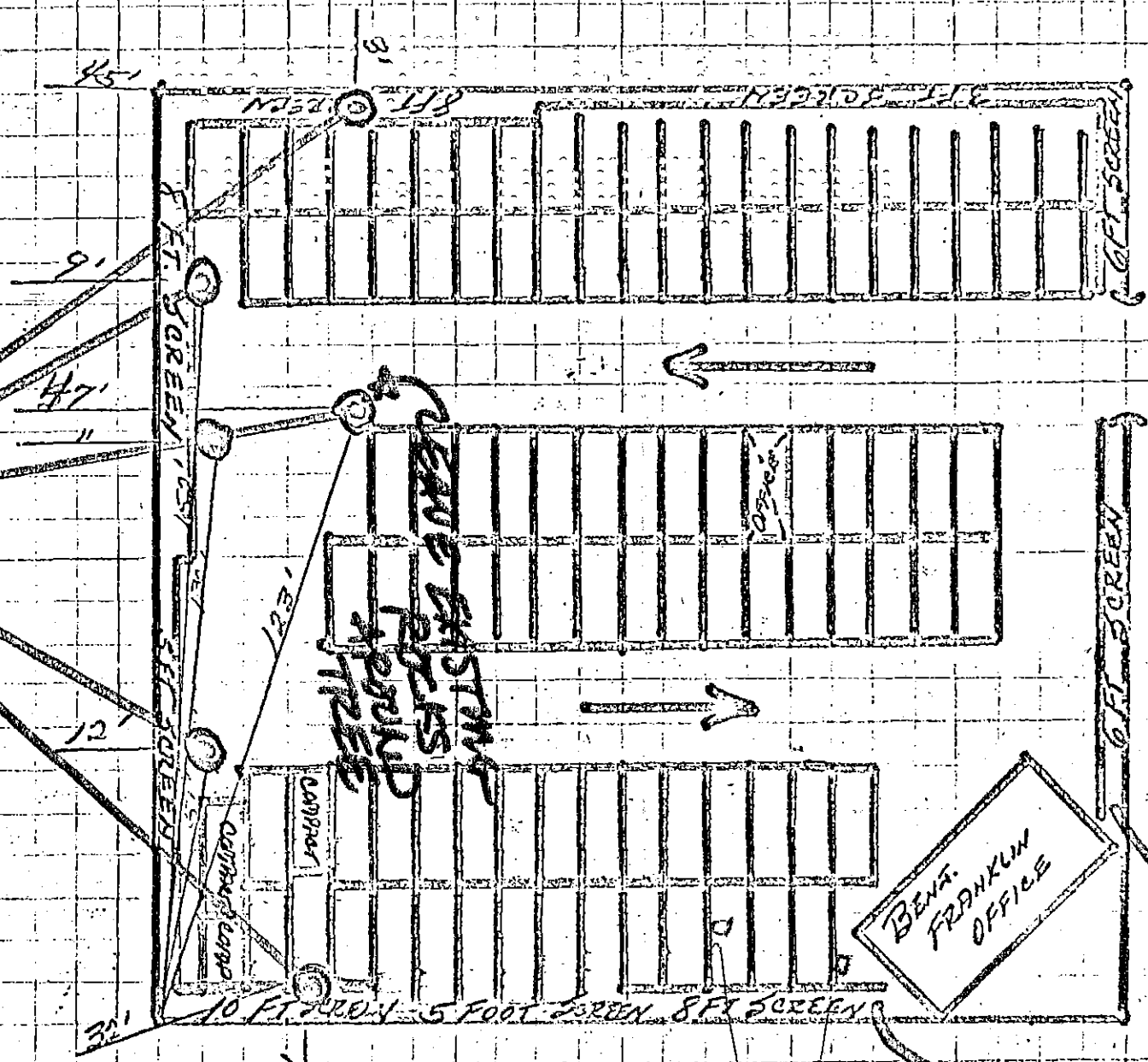
Ron L. Myles
 Deputy Director

RLV:kok
 cc :NWRO

Portland Planning Commission

NATURAL SURFACE & SOIL UNDISTURBED WITHIN UNCOVERED (UNASPHALTED) AREA AROUND TREE TRUNKS.

5" ASPHALT BEAM 5 FEET AWAY FROM BASE OF EACH TREE FOR PROTECTION - WITH



← MAR. 58. →

← MARKET ST. →

← 5th AVE →

ASPHALT BORDER LINE TO EDGE OF SCREEN AS SHOWN ON DRAWING

APPROXIMATELY AS SHOWN BY

FIELD SURVEY

**CITY
CENTER
PARKING**

120 SOUTHWEST CLAY STREET — PORTLAND, OREGON 97201

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JAN 8 1974

OFFICE OF THE DIRECTOR

January 7, 1974

Ron L. Myles
Deputy Director
Department of Environmental Quality
1234 S.W. Morrison St.
Portland, Oregon 97205

Dear Mr. Myles:

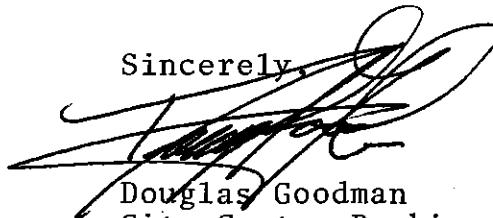
In reply to your letter of December 27th regarding the proposed Benjamin Franklin 100 space parking facility on S.W. 4th - 5th, Market - Mill Streets, City Center Parking submits the following information;

1) Since the area around the proposed new parking facility consists of mainly office buildings with very few retail shops, it is anticipated we will park approximately 75% long term, 25% short term vehicles.

2) With the temporary closing of the Bell Telephone Company 240 stall parking facility, and no new facilities allowed in the area, parking problems have arisen. The telephone company employees are filling the parking facilities to capacity by 9:00 A.M., not allowing the short term transit parker a space while doing business in the surrounding office structures.

If you have any questions regarding this letter, please contact me at your convenience.

Sincerely,



Douglas Goodman
City Center Parking

BUILDING PERMIT

No. 481735

Rec. No. 70735A

CITY OF PORTLAND
BUREAU OF BUILDINGS

Subject to the compliance with the ordinances of the City of Portland, permission is hereby granted to

Excavate for ERECT FOUNDATION MOVE
and ALTER REPAIR WRECK
 OCCUPANCY CHANGE CHANGE story Parking lot

located at 1606 SW 5th

lot 1-P Block 151 in City of Portland Addition

Name of Owner Berji Franklin Estimated value 4800⁰⁰ Feet 33²⁰

Builder C.C.P.

Permit issued 12/19 19 73 C. N. CHRISTIANSEN
Building Inspections Director

NOTE: PLUMBING, ELECTRICAL, HEATING,
STREET USE REQUIRE SEPARATE PERMITS. By ma

KEEP APPROVED COPY OF PLANS AND APPLICATION ON JOB UNTIL COMPLETED AND FINAL INSPECTION MADE.



ENVIRONMENTAL QUALITY COMMISSION

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

TOM McCALL
GOVERNOR

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Chairman, McMinnville

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Salem

ARNOLD M. COGAN
Portland

DIARMUID F. O'SCANLAIN
Director

MEMORANDUM

To : Environmental Quality Commission
From : Director
Subject: Agenda Item No. L, January 25, 1974 EQC Meeting

Foster-Midway (Sweet Home, Linn County) Health Hazard Annexation--Certification of Plans for Sewerage System

Background

An area east of the City of Sweet Home including the unincorporated communities of Foster and Midway in Linn County has been designated by the Oregon State Division of Health as an emergency health hazard area. The area was surveyed in 1973 and a 42% subsurface sewage disposal system failure rate was documented.


By a petition of the residents of the Foster-Midway area, the Health Division was requested to initiate mandatory annexation procedures under ORS 222.855 et seq. The Health Division advised the City by letter of July 16, 1973 to develop preliminary plans, specifications and a time schedule for removing or alleviating the health hazard. These have been prepared and submitted to the Department of Environmental Quality.

Evaluation

Preliminary plans and specifications together with a time schedule for design and construction of sanitary sewers for the Foster-Midway mandatory annexation area have been prepared by the firm of Cornell, Howland, Hayes & Merryfield-Hill of Corvallis at the request of the City of Sweet Home. The documentation submitted appears to be in sufficient detail to satisfy the law. The conditions dangerous to public health within the territory to be annexed can be removed or alleviated by the construction of sanitary sewers as proposed.

Recommendation

It is the Director's recommendation that the Commission approve the proposal and certify said approval to the Health Division.


DIARMUID F. O'SCANLAIN
Director

PDC:ak
January 10, 1974

PROPOSED RULES

PERTAINING TO STANDARDS

FOR

SUBSURFACE SEWAGE AND NONWATER-CARRIED
WASTE DISPOSAL

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY

Diarmuid F. O'Scannlain, Director

1234 S. W. Morrison Street
Portland, Oregon 97205

January 1974

DEFINITIONS.

- (27) "Ground water, perched" means unconfined ground water separated from an underlying body of ground water by an unsaturated zone. Its water table is a perched water table. It is held up by a restrictive or impervious layer. Perched ground water may be either permanent, where recharge is frequent enough to maintain a saturated zone above the perching bed; or temporary, where the saturated zone exists more than two (2) consecutive weeks. Where the saturated zone dissipates within two weeks, the water is not perched.
- (63) "Resource Water Level" means the level of the upper limit of the saturated zone. It is the level to which a well for drinking water purposes could be drilled by a responsible person.

DISPOSAL AREAS.

A-3. An area where the seasonal high Resource Water Level is within six (6) feet of the natural ground surface or where temporarily perched groundwater would come into contact with the disposal trench. Water ~~table~~ levels may be predicted during periods of dry weather utilizing one of the following criteria:

See last
p. 21

The following corrections are to be made in the attached copy of the Proposed Rules Pertaining to Standards for Subsurface Sewage Disposal, Department of Environmental Quality, January 1974.

NOTE: The proposed Rules, including the corrections in this Errata, will be considered for adoption by the Environmental Quality Commission, January 25, 1974 in the Public Service Building Auditorium, 920 S. W. Sixth Avenue, Portland, Oregon.

- Page 8, last line, change "course" to "coarse".
- Page 10, change "(54)" to "(55)" and "(55)" to "(54)".
- Page 15, subsection C, line 9, change "will" to "shall".
- Page 16, subsection E.1.a, insert a comma after "dwelling".
- Page 20, change "A" to "B".
- Page 21, change Footnotes 1 and 2 to Footnotes 5 and 6, respectively; change "B" to "A"; change subsection "B.1." to "A.5.", subsection "B.2." to "A.4.", and subsection "B.3." to "A.3."; and in the subsection entitled Repairs, line 3, delete "adversely affecting" and insert "causing degradation of".
- Page 22, in line 1, change "4" to "C"; in line 2, change "a" to "1" and "b" and "c" to "2" and "3" respectively; in line 12, change "b" to "2"; and in line 24, change "c" to "3".
- Page 23, in line 2, delete "land" and insert "potential drainfield"; in line 3, delete "B.4.a" and insert "C.1."; in line 9, change "5" to "A.1" and after "Public Waters" insert "or Health Hazard"; in line 11, change "will" to "would"; in line 12, after "state" insert "or would create a public health hazard"; in line 14, change "6" to "D"; in line 19, change "7" to "E"; and in the next to the last line change "8" to "A.6".
- Page 24, in lines 2 and 4, change "D" to "E"; and in line 5, change "9" to "A.2".
- Page 28, under "Dwellings", delete "Single-family dwellings..... 750 (recommend 1200)".
- Page 29, in the next to the last line, delete "standards for".
- Page 31, subsection 5, change "course" to "coarse".
- Page 32, in line 9, delete "within 100 feet of the closest"; in lines 10 and 11, delete "for a subsurface sewage disposal system installed on adjoining property in conformance with these rules"; in line 19, after "allowed", insert "where the soil profile depth to an impervious layer is less than thirty-six (36) inches,"; also in line 19, after "depth", insert "to a restrictive layer"; in the next to the last line, insert a comma after "would"; and in the last line, after "Department", insert a closing bracket.
- Page 33, in line 10, after "determined", change "be" to "by".
- Page 34, in line 3 of subsection 3, after "area", delete the semi-colon and insert a period.
- Page 37, in next to the last line, delete "above" and insert "of this section".
- Page 38, in line 5, change "D" to "E" and "is" to "are".
- Page 40, in line 16, after "would", insert a comma and "in the judgment of the Director or his authorized representative,"; and delete the same words from lines 17 and 18.
- Page 44, insert at the top of the page "-44-".
- Page 45, in Diagram 4, change the dimension shown as 1'-3" to 8" minimum.
- Page 47, in line 7, change "is" to "are".
- Page 48, in subsection B.3, line 2, delete the comma ahead of "license" and insert a comma after "license"; in the third line from the bottom of the page, after "display" delete the colon; in the next to the last line, ahead of "all", insert a comma and "on trucks,"; and in the last line delete "on trucks".
- Page 51, in lines 8 and 9, delete "in sewage disposal service is required".
- Page 54, in line 10, delete the parentheses.
- Page 56, insert at the top of the page "-56-"; and in the next to the last line of subsection 8, delete "top" and insert "bottom".
- Page 58, in line 2, insert a comma after "Dosing Tanks" and after "Pumps".
- Page 60, in line 8, delete "inches", and in line 9, after "square", insert "inches".
- Page 63, in line 14, change "G" and "H" to "H" and "I", respectively; and in the next to the last line change "H" to "I".
- Page 64, in subsection B, line 3 change "I" to "J".
- Page 65, in subsection C, line 3 change "J" to "K"; and in subsection D, line 3 change "K" to "L".

PROPOSED RULES
PERTAINING TO STANDARDS
FOR
SUBSURFACE SEWAGE DISPOSAL

DEPARTMENT OF ENVIRONMENTAL QUALITY

January 1974

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PROPOSED RULES
PERTAINING TO STANDARDS
FOR
SUBSURFACE SEWAGE AND NONWATER-CARRIED WASTE DISPOSAL
STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
JANUARY 1974

I. STATEMENT OF PURPOSE

These rules, adopted pursuant to the provisions of Chapter 835, Oregon Laws 1973, prescribe the requirements for the construction, operation and maintenance of subsurface sewage disposal systems and nonwater-carried waste disposal facilities and establish procedures for regulation of such activities. They are for the purpose of restoring and maintaining the quality of the public waters and of protecting the public health and general welfare of the people of the State of Oregon.

II. DEFINITIONS. As used in these rules, unless otherwise required by context:

[(1) "A" Horizon means the original top layer of soil having the same color and texture throughout its depth. It is usually ten (10) to twelve (12) inches thick, but may range from two (2) inches to two (2) feet.]

(1) [(2)] "Absorption facility" means a system of open-jointed or perforated piping, alternate distribution units, or other seepage system for receiving the flow from septic tanks or other treatment units and designed to distribute effluent for absorption by the soil within the unstaured zone and above any temporarily perched [liquid] ground water [body].

(2) [(4)] "Authorized Representative" means the staff of the Department of Environmental Quality or of the local unit of government performing duties for and under agreement with the Department of Environmental Quality.

(3) "Automatic Siphon" means a hydraulic device designed to rapidly discharge the contents of a dosing tank between predetermined water or sewage levels.

(4) "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.

(5) "Building sewer" means that part of the system of drainage piping which conveys sewage into a septic tank, cesspool or other treatment unit from the building or structure within which the sewage originates.

(6) "Cast-iron" means standard weight cast-iron soil pipe.

(7) "Cesspool" means a receptacle which receives the discharge of sewage from a building and which is so designed and constructed as to allow separation of solids from the liquid, digestion of organic matter during a period of detention, and to allow the liquids to seep into a minimum of five (5) [foot] feet deep [stratum of rapid draining] continuous stratum of coarse grain material through perforations in the side wall of the receptacle.

(8) "Chemical toilet" means any device used for the retention and/or treatment of human waste which is dependent upon the addition of organic or non-organic chemicals other than water for that retention and/or holding. It [shall] also means portable toilets which are intended to be emptied into water-carried sewage disposal facilities or into trailer holding tank dump stations.

(9) ["Rapid draining materials"] "Coarse grain materials" means those materials [having a saturated hydraulic conductivity greater than or equal to two (2) feet per day or those materials] with fifty (50) per cent by weight retained on a ten (10) mesh sieve (2 millimeters diameter) and less than ten (10) per cent passing a two hundred (200) mesh sieve (0.074 millimeters diameter).

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

(11) "Construction" includes installation, alteration, repair or extension.

(12) "Curtain drain" means any [gravel backfilled and adequately drained] ground water interceptor or drainage system that is gravel back-filled and provides adequate drainage.

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

(14) "Director" means the Director of the Department of Environmental Quality.

(15) "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 transpiration system.

(16) "Disposal field" means a system of disposal trenches or a seepage trench or system of seepage trenches.

(17) "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 twelve (12) inches of soil.

(18) "Distribution box" means a watertight structure which receives septic tank effluent and distributes it [in approximately equal portions] to two or more pipelines leading to a disposal area.

(19) "Distribution pipe" means an open-jointed or perforated pipe used in the dispersion of septic tank or other treatment unit effluent into disposal trenches or seepage trenches.

(20) "Dosing tank" means a watertight receptacle placed between a settling or septic tank and a distribution box or disposal area, and equipped with an automatic siphon or pump designed to discharge treated effluent intermittently to a disposal field in amounts proportioned to the area of the field and to provide a rest period between such discharges.

(21) "Dwelling" means any structure, 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, [and] mobile homes, hotels, motels, and apartments.

(22) "Effective sidewall" means the sidewall area [from the bottom of the disposal trench or seepage trench to a level not to exceed the level of the filter material] within a disposal trench from six (6) inches below the distribution pipe to a level two (2) inches above the distribution pipe, or the sidewall area within a seepage trench from the bottom of the seepage trench to a level two (2) inches above the distribution pipe.

(23) "Effluent lift pump" means a pump used to lift septic tank or other treatment unit effluent to a disposal area at a higher elevation than the septic tank or treatment unit.

(24) "Effluent sewer" means that part of the system of drainage piping that conveys treated sewage from a septic tank or other treatment unit into an absorption facility.

(25) "Filter material" means clean, crushed stone or washed gravel ranging from three quarters (3/4) to two and one-half (2-1/2) inches in size.

(26) "Grade" means the rate of fall or drop in inches per foot or percentage of fall of a pipe.

[(26) "Grease trap" means a device in which grease in sewage is intercepted and from which the grease is periodically removed for disposal.]

(27) "Ground water, perched" means unconfined ground water separated from an underlying body of ground water by an unsaturated zone. Its water table is a perched water table. It is held up by a restrictive or impervious layer. Perched ground water may be either permanent, where recharge is frequent enough to maintain a saturated zone above the perching bed, or temporary, where intermittent recharge is not great or frequent enough to prevent the perched water from disappearing from time to time as a result of drainage over the edge of or through the perching bed.

(28) "Impervious layer" means a layer which [restricts] prevents water or root penetration. In addition, it shall [also] be defined as having a [saturated hydraulic conductivity (permeability)] soil permeability of less than .06 inches per hour as outlined in the United States Department of Agriculture, Soil Conservation Service, OR-Soils-1, for that particular soil series.

(29) "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.

(30) "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.

(31) "Intermittent stream" means any watercourse that continuously flows water for a period of greater than two months in any one year, but not continuously for that year.

(32) "Invert" is the lowest portion of the internal cross section of a pipe or fitting.

(33) "Multiple compartment tank" means a settling or septic tank containing more than one settling compartment or chamber in series.

(34) "Nonwater-carried sewage disposal facility" includes, but is not limited to, pit privies, vault privies, and chemical toilets.

(35) "Occupant" means any person living or sleeping in a dwelling.

(36) "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 [lot, dwelling, or dwelling unit] 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 [the legal title] real property. Each such person as described in (b) and (c) above, thus representing the holder of legal title, is bound to comply with the provisions of these minimum standards as if he were the owner.

[(36) "Percolation test" means a test to determine the rate of movement or flow of water under the influence of gravity through the interstices or pores of a soil.]

(37) "Permit" means the written permit issued by the Director or his authorized representative bearing the signature of the Director or the signature of the authorized representative, which by its conditions authorizes the permittee to construct, install, alter, repair, or extend a subsurface disposal system or nonwater-carried waste disposal facility.

[(38) "Permeability" means the rate at which a soil transmits water when saturated and is equivalent to the term saturated hydraulic conductivity.]

(38) "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.

(39) "Privy" means a structure used for the 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 the human waste falls.

(40) "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. A malfunctioning or surfacing subsurface sewage disposal system constitutes a public health hazard.

(41) "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.

(42) "Restrictive layer" means a layer in the soil that because of its structure or low porosity does not allow water entering from above to pass through as rapidly as it accumulates. During some part of every year, a restrictive layer will have temporarily perched [liquid] ground water accumulated above it. In addition, a restrictive layer [shall also be defined as having] has a [saturated hydraulic conductivity (permeability)] soil permeability rating of 0.2 inches per hour to .06 inches per hour as outlined in the United States Department of Agriculture, Soil Conservation Service, OR-Soils-1, for that particular soil series.

(43) "Saturated zone" means that part of the water-bearing material in which all voids, large and small, are filled with water under pressure greater than atmospheric, as defined by the U.S. Geological Survey.

(44) "Scum" means a mass of sewage solids floating at the surface of sewage which is buoyed up by entrained gas, grease, or other substances.

[(45) "Saturated hydraulic conductivity" means the rate at which saturated soil transmits water under unit conditions, as defined by the U.S. Geological Survey.]

(45) "Seepage area" means the effective sidewall of a disposal trench, seepage trench, or that portion of a seepage pit through which the sewage seeps into the soil.

(46) "Seepage pit" means a type of absorption facility which is a covered pit with open-jointed lining through which septic tank or other treatment unit effluent will seep into a minimum of five (5) [feet] feet deep continuous stratum of [rapid draining] course grain material.

(47) "Seepage trench" means a ditch or trench that is more than thirty-six (36) inches deep and has vertical sides, a substantially flat bottom, and is filled with clean, coarse filter material into which a single distribution line has been laid, the trench then being backfilled with a minimum of twelve (12) inches of soil.

(48) "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.

(49) "Septic tank" means a watertight receptacle which receives the discharge of sewage from a building sewer and which is so designed and constructed as to allow separation of solids from the liquid, digestion of organic matter during a period of detention, and to allow the liquids to discharge into the soil outside of the tank through an absorption facility.

(50) "Septic tank effluent" means partially treated sewage which is discharged from a septic tank.

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

(52) "Sewage disposal service" means:

(a) The construction of subsurface sewage disposal systems or any part thereof.

(b) The pumping out or cleaning of subsurface sewage disposal systems or nonwater-carried sewage disposal facilities.

(c) The disposal of materials derived from the pumping out or cleaning of subsurface sewage disposal systems or nonwater-carried sewage disposal facilities.

(d) Grading, excavating and earth-moving work connected with the operations described in paragraph (a) of this subsection, 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.

(53) "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.

(54) "Soil separate" means the size of soil particles according to the following chart:

**USDA Soil Classification
Sizes of Soil Separates**

Clay	Silt	Very fine sand	Fine sand	Medium sand	Coarse sand	Very coarse sand	Fine gravel	Coarse gravel	Cobbles																				
	Sieve sizes	270	140	60	40	20	10	4	3/4	3																			
.001	.002	.003	.004	.006	.008	.01	.02	.03	.04	.06	.08	.1	.2	.3	.4	.6	.8	1.0	2.0	3.0	4.0	6.0	8.0	10	20	30	40	60	80
		Particle size mm.																											

(55) "Soil permeability" means 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.

(56) "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. The major textural classifications are defined [and classified] as follows:

(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.

(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 in the hand when dry, it will form a cast that will withstand careful handling. The cast formed of moist soil can be freely handled without breaking.

(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 and puddles. 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.

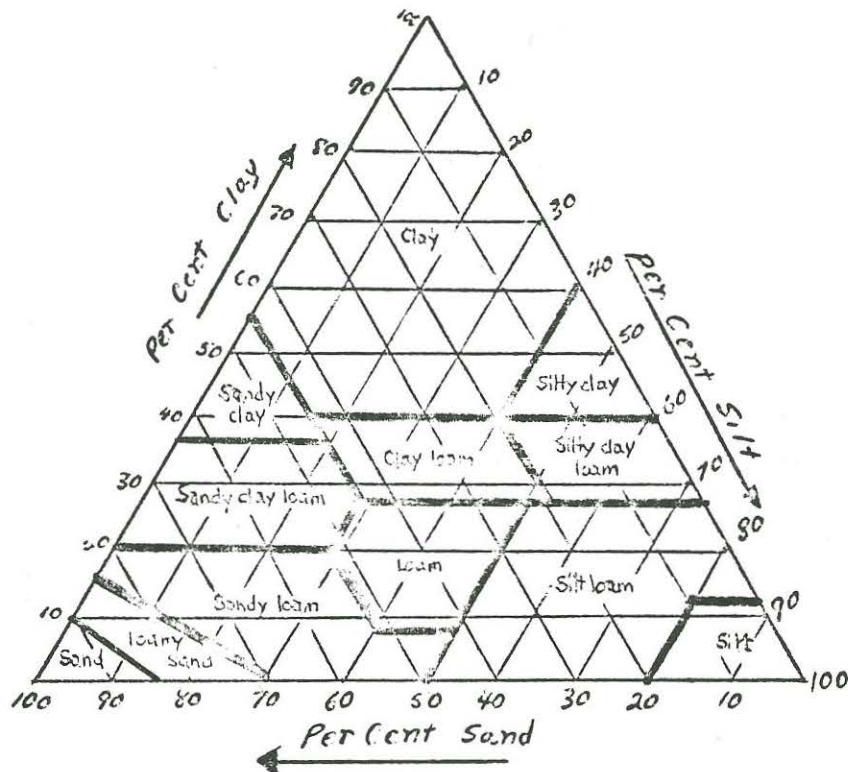
(e) Clay loam: Consists of an even mixture of sand, silt, and clay, which breaks into clods or lumps when dry. When a ball of moist soil is pressed between the thumb and finger, it will form a thin ribbon that will readily break, barely sustaining its own weight. The moist soil is plastic and will form 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 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 1/8-inch or less sized wire formed between thumb and finger will withstand considerable movement and deformation.

(h) Clay: Consists of large amounts of clay and moderate to small amounts of silt and sand. It breaks into very hard clods or lumps when dry. When moist, a thin, long ribbon or 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.

These and other soil textural characteristics are also defined as shown in the United States Department of Agriculture textural classification chart below which is hereby adopted as part of these regulations. 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.



(57) "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 [liquid] ground water body, and preceded by anaerobic bacterial breakdown within a septic tank or other treatment facility.

(58) "Subsurface sewage disposal system" means the combination of a building sewer and cesspool or a building sewer, septic tank, or other treatment unit and effluent sewer and absorption facility.

(59) "Test pit" means an open pit dug to permit examination of the soil to evaluate its suitability for subsurface sewage disposal.

(60) "Transpiration system" means the combination of a building sewer, septic tank, or other treatment unit and effluent sewer and an effluent disposal system used in soils not suitable for an absorption facility and designed to distribute effluent for transpiration by specifically located vegetation.

(61) "Unsaturated zone" means the zone between the land surface and the water table. This zone contains liquid water under less than atmospheric pressure. In parts of the zone, interstices, particularly the small ones, may be temporarily or permanently filled with water. Temporarily perched [liquid] ground water may exist within the unsaturated zone.

[(62) "Trap" means a fitting or device which provides a liquid seal without materially affecting the flow of sewage or waste water through it.]

[(62) "Vent stack" means a vertical vent pipe which is installed to provide circulation of air to and from the drainage system.]

(62) "Water table" means that surface in an unconfined water body at which the pressure is atmospheric. It is defined by the levels at which water stands in wells that penetrate the water body just far enough to hold standing water. In wells which penetrate to greater depths, the water level will stand above or below the water table if an upward or downward component of ground-water flow exists.

III. PROCEDURES FOR ISSUANCE OR DENIAL OF [SUBSURFACE SEWAGE DISPOSAL] PERMITS.

A. Application for permits [subsurface sewage disposal systems] shall be made on the Department's approved application forms. All application forms must be completed in full, signed by the applicant or his legally authorized representative and accompanied by the required non-refundable permit application fee and the specified number of copies of all required exhibits.

B. An application[s], which [are] is incomplete or incorrect, unsigned, or which [do] does not contain the required exhibits (clearly identified) will not be accepted by the [Department] Director or his authorized representative for filing and will be returned to the applicant for completion within 20 days of receipt.

C. Following the receipt of a completed application for a permit and specified permit application fee the Director or his authorized representative [will] shall make a determination as to whether or not the proposed construction will be in accordance with the rules of the Environmental Quality Commission, and within 20 days after the date of such receipt [will] shall either issue or deny the permit, unless weather conditions or distance and unavailability of transportation prevent the issuance or denial within 20 days, in which case the Director or his authorized representative [will] shall notify the applicant of the reason for the delay and will issue or deny the permit within 60 days of such notification. If the determination referred to [in paragraph C] above cannot be made within the time limits specified because of frozen ground conditions or seasonal variations in the liquid water level, the application shall be denied until such time as the required determination can be made by the Director or his authorized representative.

D. The Director or his authorized representative [will] shall issue a permit only if he finds that the proposed construction will be in accordance with the rules of the Environmental Quality Commission and [will] shall issue a permit only to a person licensed by the Department to perform sewage disposal services, or to an owner or contract purchaser in possession of the land.

E. The Director or his authorized representative [will] shall not issue a permit if a community or area-wide sewerage system is available which will [satisfactorily accommodate] have adequate capacity to serve the proposed sewage discharge and which is being, or at the time of connection will be, operated and maintained in compliance with the provisions of a waste discharge permit issued by the Department.

1. A community or area-wide sewerage system shall be deemed available if its nearest connection point from the line of the property on which is located the nearest building to be connected is or will be:

a. For a proposed single family dwelling or other establishment with a projected sewage flow of not more than 300 gallons per day, 300 feet or less.

b. For a proposed subdivision or group of two (2) to five (5) single family dwellings, or equivalent in projected sewage flow, not more than 200 feet multiplied by the number of dwellings or equivalents.

c. For a proposed subdivision or group of six (6) to ten (10) single family dwellings, or equivalent, not more than 1000 feet plus 150 feet multiplied by the number of dwellings or equivalents exceeding five (5).

d. For a proposed subdivision or group of eleven (11) to twenty (20) single family dwellings, or equivalent, not more than 1,750 feet plus 100 feet multiplied by the number of dwellings or equivalents exceeding ten (10).

e. For a proposed subdivision or group of twenty-one (21) to fifty (50) single family dwellings, or equivalent, not more than 2,750 feet plus 50 feet multiplied by the number of dwellings or equivalents exceeding twenty (20).

2. For a proposed subdivision or other development with more than 50 single family dwellings, or equivalent, the Department shall make a case-by-case determination of the availability of a community or area-wide sewerage system.

F. A permit for construction of a subsurface sewage disposal system designed to serve five (5) or more single family dwelling units or any other establishment with a projected sewage flow of more than 1200 gallons per day shall not be issued until:

1. Plans and specifications for the proposed subsurface sewage disposal system have been reviewed and approved by the Department. In such review the Department shall consider the recommendations of the Director's authorized representative, but in no event shall approval be granted if the Department has evidence of non-conformance of such proposed system with applicable local land-use planning, zoning, and building requirements.

2. The person proposing to construct such a system has filed with the Department, pursuant to the provisions of ORS 449.400, as amended by Section 196 of Chapter 835, Oregon Laws 1973, a surety

bond of a sum required by the Commission, not to exceed the sum of \$25,000. The bond shall be executed in favor of the State of Oregon and shall be approved as to form by the Attorney General.

G. A permit issued pursuant to these rules shall be effective for a period of one year from the date of issuance.

H. Prior Construction Permits or Approvals - No permit or approval granted prior to January 1, 1974 which does not expressly authorize construction of a subsurface sewage disposal system shall be valid after the effective date of these rules. Any permit or written approval expressly authorizing [for] construction of a subsurface sewage disposal system and granted prior to [the adoption of these rules] January 1, 1974 shall be effective for a period of one year from the date of issuance of the permit or written approval unless the permit or written approval specifies a shorter period. The rules in effect on the date of issuance of the permit or written approval and any special conditions contained in the permit or written approval shall apply. Notwithstanding the foregoing, the construction of any subsurface sewage disposal system started prior to January 1, 1974 may be completed if such construction will comply with the governing rules and conditions in effect on the date of commencement of construction.

I. Procedure for Disposal System Abandonment

1. When a sewerage system becomes available and the building sewer has been connected thereto or the sewage source has been eliminated, the owner or controller of the property shall have the septic tank, seepage pit or cesspool cleaned of sludge and filled with clean bank-run gravel or equivalent.

2. No permit for construction or installation of a replacement septic tank, seepage pit or cesspool shall be issued unless provision has been made for abandonment of the existing septic tank, seepage pit or cesspool in accordance with the above.

3. No permit or authorization for connection to a sewerage system shall be issued unless provision has been made for abandonment of the existing septic tank, seepage pit or cesspool in accordance with the above.

IV. SUBSURFACE SEWAGE DISPOSAL SYSTEMS

All subsurface sewage disposal systems shall comply with the following requirements:

A. Minimum Separation Distances - Septic tanks and all other treatment units and all portions of any subsurface sewage disposal area, including the replacement area, shall not be installed closer than the following distances from items below:¹

	<u>Sewage Disposal Area</u>	<u>Septic Tanks and Other Treatment Units</u>
1. Ground water supplies including wells and springs [and cisterns.]	100 ft.	<u>50</u> [25] ft.
2. Property Line ^{2,3}		
a. <u>When adjacent to property served by a community water supply</u>	10 ft.	10 ft.
b. When adjacent to property which is or may be served by individual or public water supply (except on property line abutting public street)	<u>25</u> ft.	<u>10</u> ft.
3. <u>Down gradient surface public waters or intermittent streams, including groundwater interceptors and cut banks or ditches which intercept groundwater</u> ⁴	100 ft.	<u>50</u> [25] ft.

Footnotes:

1. Greater separation distances will be required if the disposal system will adversely affect the quality of any public waters of the state.
2. Where more than one lot or parcel is served by a common subsurface disposal system, no property setbacks shall be required from the common property line, providing the minimum separation distance between wells and subsurface sewage disposal systems can be maintained.
3. Community and public water supplies are as defined in Sections 167 and 168 of Chapter 835, Oregon Laws 1973.
4. Set back from streams shall be measured from bank drop-off or mean yearly high water mark. [whichever is greater]

	<u>Sewage Disposal Area</u>	<u>Septic Tanks and Other Treatment Units</u>
4. Water mains or service lines	10 ft.	10 ft.
5. Foundation lines of any building including garages and outbuildings ¹	10 ft.	5 ft.
6. [Above] Top of <u>down-gradient cut banks, except where intercepting ground water²</u>	25 ft.	---

B. General Standards

1. Prohibited Flows - No cooling water, air conditioning water, ground water, oil, or roof drainage shall be discharged to any subsurface sewage disposal system. [No petroleum derivatives shall be discharged into any subsurface sewage disposal system.]

2. Repairs - If in the judgment of the Director or his authorized representative, a subsurface sewage disposal system is creating a public health hazard or is adversely affecting the quality of public waters of the state, the system shall be repaired.

3. Maintenance - All subsurface sewage disposal systems shall be maintained so as not to create a public health hazard or [affect] cause degradation of the quality of any public waters.

Footnotes:

1. Septic tanks and other treatment units shall be kept as close to the minimum separation distance from the foundation as feasible to minimize opportunity for clogging of the building sewer.
2. The sewage disposal system shall be set back not less than five (5) feet for each one (1) foot of elevation of the cut bank, except that the minimum set back in all cases shall be 25 feet and the maximum set back required is 100 feet.

4. Replacement Area -

a. Except as provided in Subsections b and c below all lots on which a subsurface sewage disposal system is to be installed must have at least sufficient suitable disposal area for a full replacement disposal area which meets all of the requirements of the rules contained herein, and which shall be installed in the event of disposal system failure. The replacement area shall be kept vacant, free of development, traffic or soil modification. The Director or his authorized representative may require additional area to allow for anticipated expansion of commercial establishments.

b. In an area under the control of a city or other legal entity authorized to construct, operate and maintain a community or area-wide sewerage system, a subsurface sewage disposal system may be installed without a replacement disposal area provided the application for permit includes a copy of a legal commitment from the city or other legal entity that within five (5) years from the date of the application such city or other legal entity will extend to the property covered by the application a community or area-wide sewerage system meeting the requirements of the Commission, and provided further that the proposed subsurface sewage disposal system will otherwise comply with the requirements of these rules.

c. A redundant disposal field system satisfying the minimum standards set forth in Appendix C of these rules may be installed for single family dwellings on lots and parcels for which the deeds had been recorded or a subdivision plat or partitioning approved prior to January 1, 1974.

A redundant disposal field system shall not be approved where sufficient land area exists on the lot or parcel to meet the requirements of Subsection B.4.a of this Section. Whenever the installation of a redundant disposal field system is approved, the installation of both the main system and the redundant system shall be completed, except for covering, prior to the inspection required by Section 214, Chapter 835, Oregon Laws 1973.

5. Public Waters - If, in the judgment of the Director or his authorized representative, the installation of a subsurface sewage disposal system will [adversely affect] cause degradation of the quality of any public waters of the state, he shall not authorize the installation of the system.

6. Multiple Service - Where a water-carried subsurface sewage disposal system will serve more than one (1) lot or parcel, such a system shall be under the control of a city or other legal entity which has been formed in compliance with Oregon Revised Statutes, Chapter 450 or 451.

7. Property Line Crossed - No sewage disposal system or part thereof shall cross any property line unless a recorded utility easement is secured which permits installation, maintenance, repair or replacement of the proposed construction. This easement must accommodate the entire proposed subsurface sewage disposal system, including setbacks, which lies beyond the property line.

8. Pipe Materials and Construction - Standards required to be met for pipes used for subsurface disposal systems including the building sewer,

the effluent sewer, and the distribution pipes in the absorption facility or transpiration system are found in Appendix D. All pipe used [for] in subsurface sewage disposal systems shall comply with the standards set forth in Appendix D which by this reference are incorporated herein.

9. Capacity - The system shall have adequate capacity to properly dispose of the maximum daily sewage flow. The quantity of sewage shall be [estimated] determined by the Director or his authorized representative [using] based on the greater of the figures listed in Columns 1 and 2 of the following table:

Quantities of Sewage Flows

Type of Establishment	Column 1	Column 2
	Gallons Per Day	Minimum Gallons Per Establishment Per Day
Airports	5 (per passenger)	150
Bathhouses and swimming pools	10 (per person)	300
Camps: (4 persons per campsite, where applicable)		
Campground with central comfort stations	35 (per person)	700
With flush toilets, no showers	25 (per person)	500
Construction camps (semi-permanent)	50 (per person)	1000
Day camps (no meals served)	15 (per person)	300
Resort camps (night and day) with limited plumbing	50 (per person)	1000
Luxury camps	100 (per person)	2000
Churches	5 (per seat)	150
Country clubs	100 (per resident member)	2000
Country clubs	25 (per non-resident member present)	---
Dwellings:		
Boarding houses	100 (per bedroom)	600
Additional for non-resident boarders	10 (per person)	---
Multiple family dwellings (apartments)	150 (per bedroom)	600
Rooming houses	80 (per bedroom)	500
Single-family dwellings	150 (per bedroom)	300
Factories (exclusive of industrial wastes, with shower facilities)	35 (per person per shift)	300
Factories (exclusive of industrial wastes, with- out shower facilities)	15 (per person per shift)	150
Hospitals	250 (per bed space)	2500
Hotels with private baths	120 (per room)	600
Hotels without private baths	100 (per room)	500
Institutions other than hospitals	125 (per bed space)	1250
Laundries, self-service	500 (per machine)	2500
Mobile home parks	375 (per space)	750
Motels with bath, toilet, and kitchen wastes	100 (per bedroom)	500
Hotels	80 (per bedroom)	400
Picnic Parks (toilet wastes only)	5 (per picnicker)	150

Quantities of Sewage Flows

Type of Establishment	Column 1 Gallons Per Day	Column 2 Minimum Gallons Per Establishment Per Day
Picnic Parks (with bathhouses, showers and flush toilets)	10 (per picnicker)	300
Restaurants (toilet and kitchen wastes)	40 (per seat)	800
Restaurants (single-service with toilet)	2 (per customer)	300
Restaurants (additional for bars and lounges)	10 (per seat)	--
Schools: (30 persons per classroom)		
Boarding	100 (per person)	3000
Day, without gyms, cafeterias or showers	15 (per person)	450
Day, with gyms, cafeterias and showers	25 (per person)	750
Day, with cafeteria, but without gyms or showers	20 (per person)	600
Service stations	10 (per vehicle served)	500
Swimming pools and bathhouses	10 (per person)	300
Theaters:		
Movie	5 (per seat)	300
Drive-in	20 (per car space)	1000
Travel trailer parks (without individual water and sewer hookups)	50 (per space)	300
Travel trailer parks (with individual water and sewer hookups)	100 (per space)	500
Workers:		
Construction (at semi-permanent camps)	50 (per person)	300
Day, at schools and offices	15 (per shift)	150

V. SEPTIC TANKS

All septic tanks shall comply with the following requirements:

A. Required liquid capacity of the first compartment of septic tanks shall be at least 750 gallons for flows up to 500 gallons per day; shall be equal to at least one and one-half (1-1/2) days' sewage flow for flows between 500 and 1500 gallons per day; and shall be equal to 1125 gallons plus seventy-five (75) percent of the daily sewage flow for flows greater than 1500 gallons per day. Additional volume may be required by the Director or his authorized representative for industrial wastes or other special wastes. The quantity of daily sewage flow shall be estimated by the Director or his authorized representative using the daily sewage flow chart under the rule section on Subsurface Sewage Disposal Systems.

B. Minimum Liquid Capacity - Septic tanks shall be sized according to [Item] Subsection A above except that in no case shall a septic tank have a liquid capacity less than indicated in the following:

1. Single Family Dwellings:

Number of Bedrooms	Required Minimum Capacity in Gallons	Recommended Liquid Capacity in Gallons
1	750	1200
2	750	1200
3	900	1200
4 *	1000	1200

*For each additional bedroom, add 250 gal to tank capacity.

2. Establishments Other Than Single-Family Dwellings

Type of Establishment	Septic Tank Minimum Liquid Capacity In Gallons
Airports	750
Bathhouses and swimming pools	2000
Camps:	
Campground with central comfort stations	2000
With flush toilets, no showers	1200
Construction camps (semi-permanent)	2000
Day camps (no meals served)	1200
Resort camps (night and day) with limited plumbing	2000
Luxury camps	3000
Churches	750
Country clubs	3000
Dwellings:	
Boarding houses	2000
Multiple family dwellings (apartments)	2000
Rooming houses	2000
Single-family dwellings	750 (recommend 1200)
Factories (exclusive of industrial wastes, with shower facilities)	[2000] <u>1200</u>
Factories (exclusive of industrial wastes, without shower facilities)	750
Hospitals	5000
Hotels with private baths	2000
Hotels without private baths	2000
Institutions other than hospitals	3000
Laundries, self-service	[2000] <u>3000</u>
Mobile home parks	3000
Motels with bath, toilet, and kitchen wastes	2000
Motels	2000
Picnic Parks (toilet wastes only)	1200
Picnic Parks (with bathhouses, showers and flush toilets	2000
Restaurants (toilet and kitchen wastes)	3000
Restaurants (single-service with toilet)	1200
Schools:	
Boarding	[3000] <u>3500</u>
Day, without gyms, cafeterias or showers	1200
Day, with gyms, cafeterias and showers	2000
Day, with cafeteria, but without gyms, or showers	[1200] <u>2000</u>
Service stations	2000
Swimming pools and bathhouses	2000
Theaters:	
Movie	1200
Drive-in	[1200] <u>2000</u>
Travel trailer parks (without individual water and sewer hookups)	2000
Travel trailer parks (with individual water and sewer hookups)	[3000] <u>2000</u>
Workers:	
Construction (at semi-permanent camps)	[2000] <u>1200</u>
Day, at schools and offices	750

Minimum liquid capacities of septic tanks for structures and establishments not listed shall be determined by the Director or his authorized representative.

C. Installation

1. Septic tanks installed with more than eighteen (18) inches of soil cover shall have a manhole provided for access to the tank.

2. No septic tank shall be installed in such a manner that the sewage flow from one building drain or building sewer is divided with one portion being discharged to a second tank.

3. Septic tanks that are installed in a road or driveway or otherwise are subject to vehicular traffic shall be constructed in accordance with Diagram [2] 1, Appendix A, which by this reference is incorporated herein.

4. Septic tanks shall be installed on a level, stable base that will not settle.

5. Septic tanks shall be installed in a location so as to be accessible for servicing and cleaning.

6. Backfill around and over the septic tank shall be placed in such a manner as to prevent damage to the tank or connected pipes.

7. No septic tank shall be covered by concrete or asphalt surfaces unless provisions are made for access in accordance with these rules.

8. Where practicable the sewage flow from any establishment shall be consolidated into one septic tank.

D. Construction

The [minimum] standards for construction of septic tanks [are found] shall comply with the minimum standards set forth in Appendix A.

VI. DISPOSAL AREAS

A. Disposal Trenches - No disposal trench shall be installed where any of the following conditions are present except as provided in Subsection B below:

NOTE: Measurements are to be taken on the downhill side of the test pit.

1. An impervious layer is less than thirty-six (36) inches below the surface of the ground or less than twelve (12) inches below the bottom of the disposal trench.

2. A restrictive layer is less than thirty (30) inches below the surface of the ground or less than six (6) inches below the bottom of the disposal trench.

3. An area where the seasonal high [saturated zone] water table (saturated zone) is within six (6) feet of the natural ground surface [or a] or where temporarily perched [liquid water body] groundwater would come into contact with the disposal [field] trench. [Projected levels of liquid water] Water table levels may be predicted during periods of dry weather utilizing one of the following criteria:

a. Where water movement is laterally restricted, mottling consisting of various shades of gray and red specks, splotches, and/or tongues throughout the soil and caused by alternated saturation and desiccation, or dark black highly organic soils, may be found at the liquid water level.

b. Where water movement is laterally unrestricted, [no mottling will occur and] as evidenced by the lack of mottling, the liquid water level predictions where possible shall be based on past observations by the Director or his authorized representative. If such observations have not been made, or are not conclusive, application for a permit shall be denied until appropriate observations can be made.

4. Slopes exceeding these maximums:

a. Where restrictive layers are encountered:

Depth to Restrictive Layer	Maximum Slope Allowed
Greater than 48 inches	25%
Between 36 and 48 inches	18%
Between 30 and 36 inches	12%

b. Where impervious layers are encountered:

Depth to Impervious Layer	Maximum Slope Allowed
Greater than 72 inches	25%
Between 54 and 72 inches	18%
Between 36 and 54 inches	12%

5. Where [rapidly draining] course grain material [will adversely affect public waters and are] is located within thirty-six (36) inches of the natural ground surface and the installation and utilization of a disposal trench would cause degradation of the quality of public waters.

~~6.~~ An area where an accumulation of surface water will occur for a period of two (2) consecutive weeks or longer. ~~6.~~

~~7.~~ An area that has been filled or the soil has been modified. [A disposal field shall not be installed where the "A" horizon has been cut away without prior written approval of the Department.]

~~7.~~ An area that will be covered by asphalt or concrete, or where vehicular traffic will be allowed to drive over the field after installation.

~~8.~~ An area subjected to excessive saturation due to, but not limited to, artificial drainage of ground surfaces, driveways, roads, and building roof drains.

[9. An area where provisions have not been made for the drainage of the ground surface of and adjacent to a disposal area to prevent the accumulation of surface water and to prevent erosion.]

NOTE: Curtain Drains

If the restrictive layer is within the acceptable limits for a disposal area as defined in these rules, a curtain drain may be used to intercept and/or drain a perched liquid water. However, a curtain drain shall be used only on ground with a minimum slope of five (5) percent, and shall be located at least twenty (20) feet up-gradient from the nearest disposal area, and at least one hundred (100) feet down-gradient from any other disposal area or [property line] within 100 feet of the closest potential disposal area for a subsurface sewage disposal system installed on adjoining property in conformance with these rules.

B. [Low Density Areas] Rural Areas

[1. For single-family dwellings in areas where the disposal area and the replacement area can be located more than 250 feet from any property lines, surface public waters, or ground water supplies, the installation of] For single-family dwellings proposed to be constructed in certain rural zoning classifications designated by the county and approved by the Department, the installation of a disposal trench [may] shall be considered and may be allowed where the soil profile depth is less than thirty (30) inches, where the [saturated zone] seasonal high water table (saturated zone) is less than six (6) feet of the natural ground surface, where the topographical slope is greater than 25%, where [rapid draining] coarse grain materials are less than thirty-six (36) inches of the natural ground surface, or where the proposed disposal area has been filled, [where] provided a public health hazard [will] would not be created, [or where] and the installation [will] would not [adversely affect] cause degradation of the public waters of the state and if requiring strict compliance with the foregoing [restrictions] measurement or modification limitations would in the judgement of the Department, be unreasonable, burdensome or impractical [in the judgement of the Department due to

special physical conditions or cause. Any permit proposed to be issued under these conditions by any authorized representative other than the Department's staff shall receive the prior written concurrence of the Department.

C. Minimum Seepage Area

[1.] All disposal fields shall comply with the following requirements:

1. The bottom of the disposal trench or seepage trench shall not be calculated as seepage area. Only the trench effective sidewall area shall be calculated as seepage area. The amount of effective sidewall area required for each disposal field shall be determined by consideration of soil characteristics, including texture and levels of restrictive layers, observed and anticipated perched [liquid] ground water levels, topographical and climatological features. [Percolation or other tests to determine saturated hydraulic conductivity may be used only as a supplement to the requirements of this section.]

2. Where restrictive layers are encountered, the following chart shall be used to determine the minimum effective sidewall area. (Note: This chart shall not be used to determine soil suitability for disposal area installation.)

MINIMUM SIDEWALL SEEPAGE AREA IN SQUARE FEET PER 150 GALLONS DAILY WASTE FLOW DETERMINED FROM TYPE OF SOIL VERSUS DEPTH OF RESTRICTIVE LAYER.

DEPTH TO RESTRICTIVE LAYER	30"	150	180	250	275	300	330	NOT ACCEPTABLE
	36"	125	150	180	250	275	300	
	42"	125	150	180	200	275	300	
	48"	125	150	180	200	275	300	
	54"	100	125	150	180	250	275	
	60"	100	125	150	180	250	275	
	66"	100	125	150	180	250	275	
	72" or more	100	100	125	150	180	250	
	SANDY LOAM SAND	LOAM	SILT LOAM	CLAY LOAM	SILTY CLAY LOAM	SILTY CLAY	CLAY*	

Soil Type at the Depth of Disposal Trench

3. Where observed or projected liquid water is encountered, the following chart shall be used to determine the minimum effective sidewall [seep] (Note: this chart shall not be used to determine soil disposal area installation.)

AGE AREA IN SQUARE FEET PER 150 GALLONS DAILY WASTE FLOW SOIL VERSUS DEPTH TO [LIQUID] WATER DURING THE HIGHEST

250	275	300	330	NOT ACCEPTABLE
180	250	275	300	
150	250	275	300	
125	250	275	300	
100	180	250	275	
75	150	250	275	
50	125	250	275	
25	100	180	250	
			SILTY CLAY	CLAY

tion
with the fore
limitations would in
burdensome or impractical [i]

[NOTE: A minimum of 300 square feet of effective sidewall area shall be provided for each disposal field.]

*Clays that have a low or moderate shrink-swell potential combined with a moderate or strong structure according to the SCS OR-1 for that type of soil shall be permitted with a soil rating of 330 square feet per 150 gallons daily waste flow.

D. Minimum [Construction] Installation Requirements for Disposal Trenches
(See Diagram 1)

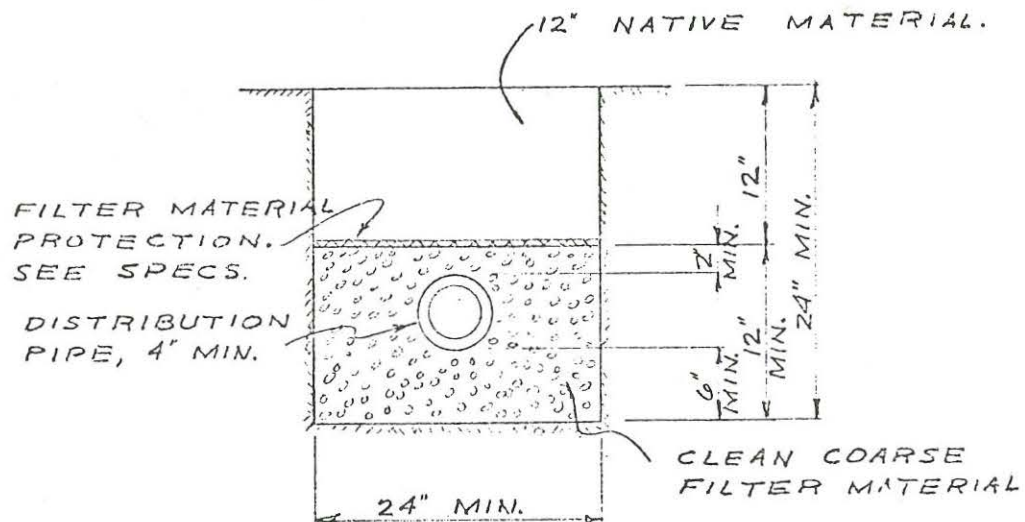
1. Excavations - The bottom of each disposal trench shall be parallel with the grade of the tile. When the subsoil within the level of the disposal trench is wet, the disposal trench sidewalls shall be raked or hand finished to insure permeability.

2. Filter material - No material of less than three quarters (3/4) inch in diameter shall be allowed in the disposal trench. The filter material shall extend the full width of the disposal trench or seepage trench, shall not be less than six (6) inches deep beneath the bottom of the distribution pipes, and shall extend at least two (2) inches above the top of the distribution pipes. The filter material shall be covered with untreated building paper, or a minimum of six (6) inches of straw, or other material approved by the [Director or his authorized representative] Department before the trench is backfilled with earth. In sandy soils which can be expected to enter the filter material even many years after installation, the filter material may be covered with plastic or tar paper.

3. Trench Backfill - The disposal trench shall be backfilled with earth that is free from stones larger than ten (10) inches in diameter,

frozen clumps of earth, masonry, stumps, or waste construction materials. Backfill shall be carefully placed to prevent damage to the piping and to the installation.

Diagram 1 (New)



DISPOSAL TRENCH

4. Distribution pipes shall have a minimum diameter of four (4) inches and shall be laid true to line and grade. The distribution pipe may consist of perforated bituminized-fiber, perforated plastic, or vitrified clay pipe or cement tile laid with loose joints. A description of the approved materials and the construction requirements is found below.
 - a. The lines between each of the field lateral lines and the distribution box shall be constructed with watertight joints and shall

be bedded on undisturbed soil. No open-jointed or perforated distribution line shall be within [five (5)] four (4) feet of a distribution box. The trenches shall not be constructed to allow septic tank effluent to flow backwards from the field laterals to undermine the distribution box and septic tank.

b. Distribution pipes in disposal trenches - All disposal trenches shall have a distribution pipe of at least four (4) inch diameter centered in the middle of the ditch. The pipe installation shall conform with the following requirements unless otherwise approved by the Department:

1) Plastic pipe shall be installed with the aid of grade boards or stakes which have been installed before any filter material is placed in the ditch, and there shall be no less than six (6) inches of filter material under every portion of the pipe.

2) Concrete tile shall be laid with one-fourth (1/4) inch open joints. The top one-half (1/2) of these joints must be protected by individual strips or a capping strip of either treated building paper or tar paper. Suitable tile connectors, spacers, collars, or clips may be used. The tile must be laid on a grade board at least six (6) inches high and one (1) inch wide. This grade board must run the total length of the seepage trench and must remain in place after backfilling. If used in soils with a phi of less than 6.0, Special-Quality pipe as defined in ASTM C 412-65 shall be installed.

3) Vitrified clay drain tile shall be installed in the same manner as concrete pipe as in Subsection D.4.b.(2) above.

4) Bituminized fiber pipe shall be installed with the aid of

grade board or stakes which have been installed before any filter material is placed in the ditch, and there may be no less than six (6) inches of filter material under every portion of the pipe.

5) No disposal pipe shall be installed which does not comply with the standards in Appendix D, which by this reference is incorporated herein.

5. Disposal trenches shall be constructed in accordance with the standard dimensions listed in the following table:

a. Minimum lines per field using equal distribution system	2
b. Maximum length per trench [using equal distribution system]	125 feet
c. Minimum diameter of distribution lines	4 inches
d. Maximum grade of distribution lines [from point nearest the septic tank to the point of the farthest distance] <u>and bottom of Disposal Trenches</u>	[5] 2 inch drop in every 125 feet [(Prefer 2-inch drop)]
e. Minimum bottom width of trench	[13] 24 inches
f. Minimum depth of trench	24 inches
g. Maximum depth of trench	36 inches
h. Minimum depth of backfill over filter material	12 inches
i. Minimum distance of undisturbed earth between disposal trenches	8 feet*
j. Minimum depth of filter material under 4-inch tile	6 inches
k. Minimum total depth of filter material	12 inches
l. Maximum depth of filter material over distribution pipe	2 inches

* Note: In redundant disposal systems, this dimension applies to disposal trenches designed to operate simultaneously.

E. Seepage Pits, [and] Cesspools, and Transpiration Systems

1. Seepage pits [and] cesspools, and transpiration systems shall not be used for the subsurface disposal of sewage except where specifically approved by the Department. Any permit for a seepage pit or cesspool proposed to be issued by any authorized representative other than Department's staff shall receive the prior written concurrence of the Department.

[2. Seepage pits and cesspools shall not be used in areas having groundwater supplies including wells, springs, and cisterns, or where public waters will be adversely affected.]

2. Standards required to be met for seepage pit and cesspool construction [standards] are found in Appendix [C.] D.

F. Seepage Trenches

1. Seepage trenches may be used in areas where the unsaturated zone is sufficiently deep and where degradation of the quality of any public waters [will] would not [be adversely affected] result. Any permit for a seepage trench proposed to be issued by any authorized representative other than the Department's staff shall receive the prior written concurrence of the Department.

2. Seepage trench construction shall be the same as for disposal trenches except that the maximum depth may exceed thirty-six (36) inches.

[G. Transpiration Systems

1. Transpiration systems shall not be used for the subsurface disposal of sewage except where specifically approved by the Department. Any permit for a transpiration system proposed to be issued by any authorized repre-

sentative other than Department's staff shall receive the prior written concurrence of the Department.]

G. Repair of Disposal Areas

1. In repairing a failing disposal system consideration may be given to the installation of a disposal trench where the soil profile depth[s] [are] is less than thirty-six (36) inches to an impervious layer, where the soil profile depth[s] [are] is less than thirty (30) inches to a restrictive layer, where the seasonal high water table (saturated zone) is less than six (6) feet of the natural ground surface, where the topographical slope is greater than twenty-five percent (25%), where [rapid draining] coarse grain materials are less than thirty-six (36) inches of the natural ground surface, where the proposed disposal area has been filled, and where the minimum separation distance cannot be maintained [where a public health hazard will not be created, or where the installation will not adversely affect the public waters of the state], if requiring strict compliance with the foregoing measurement or modification limitation would result in unreasonable closure for use or occupancy of any buildings in the judgment of the Director or his authorized representative.

2. [Within feasible limitations] If the repair of a failing subsurface disposal trench system [shall] requires the installation of [an adequate amount of disposal trench to make] additional sidewall seepage area, then the total effective sidewall seepage area, where feasible, shall comply with these rules. In no such case shall a repair consist of the addition of disposal trench equivalent to less than fifty percent (50%) of the effective sidewall area in the original installation.

3. In constructing a disposal trench repair, where practicable, a serial distribution technique shall be used with an overflow pipe or drop-box used to divert the effluent to the repair system and allowing the failing system time to recover before the effluent diverts back to the original disposal area.

VII. DISTRIBUTION TECHNIQUES

A. Distribution System Design - Disposal trenches shall be constructed according to one of the following methods or other techniques approved by the Department depending on the slope of the ground surface:

1. Loop System (Diagrams 1A and 1B)
 - a. The loop system shall be used on level ground only. All lines and headers shall be level with no drop throughout their length.
 - b. A distribution box may receive the effluent sewer and shall divert the flow of sewage into a header for each lateral in the disposal facility. In lieu of a distribution box, a series of "tees" laid on an even grade may be used.
 - c. The disposal trenches shall be interconnected at the farthest point from the distribution box by "tees" connecting an additional disposal trench which shall run at right angles to the other trenches.
 - d. The elevation of all disposal trenches shall be the same.
2. Equal Distribution System (Diagram 2)
 - a. The equal distribution system shall be used on level ground only.
 - b. A distribution box shall receive the effluent sewer and shall divert the flow of sewage into a header for each lateral in the disposal facility.
3. Serial System (Diagrams 3A and 3B)
 - a. The Serial System shall be used on sloping ground. The bottom of each trench and its distribution line shall be level.
 - b. One overflow pipe or one set of drop-boxes per line shall be used to divert the effluent to the succeeding trench at such time as each fills.

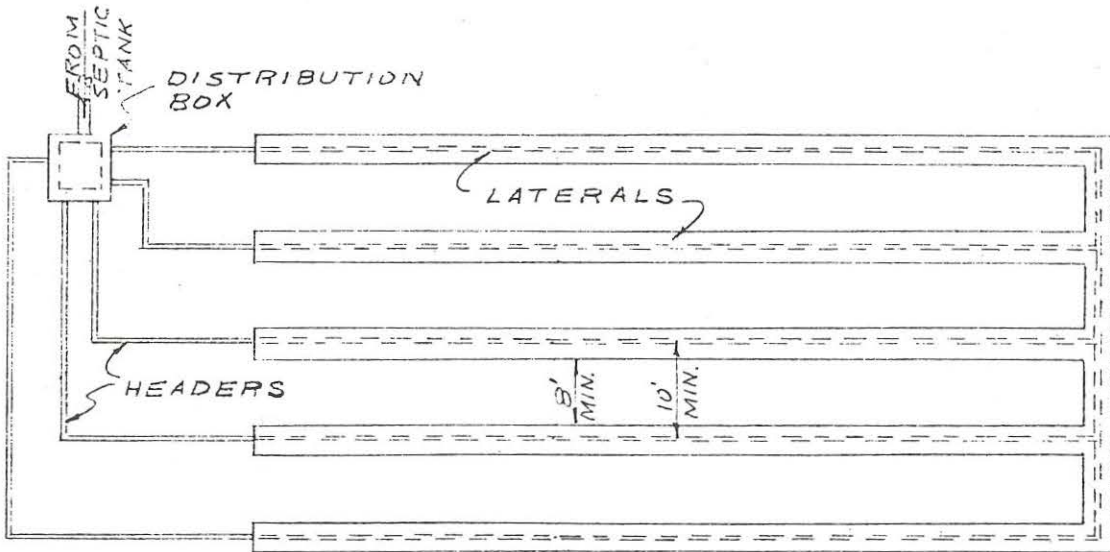


Diagram 1A (Revised)
LOOP SYSTEM (DISTRIBUTION BOX)

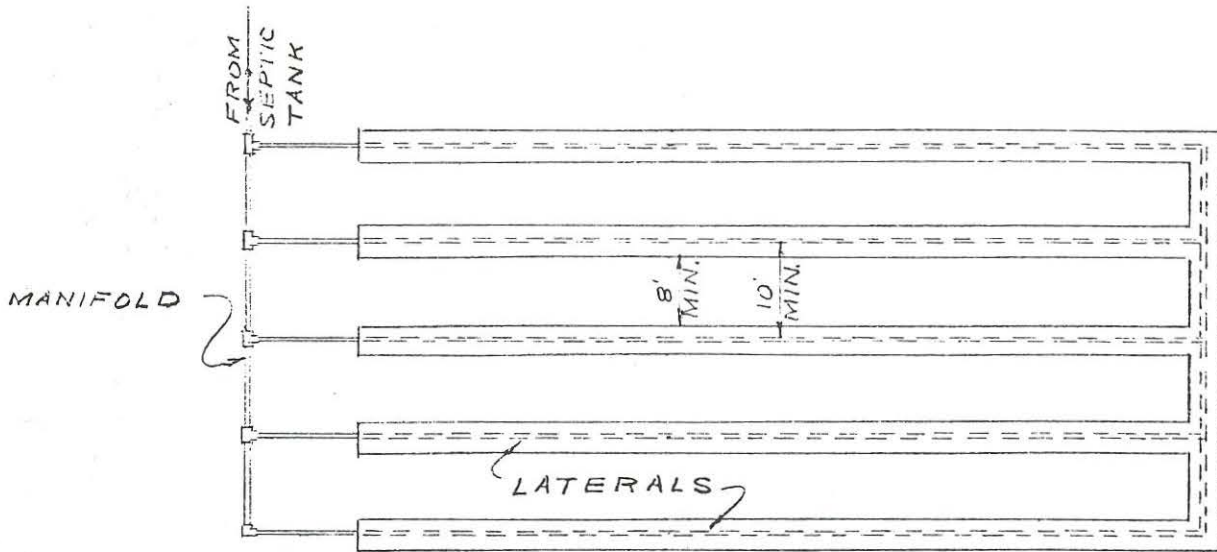


Diagram 1B (Revised)
LOOP SYSTEM (MANIFOLD)

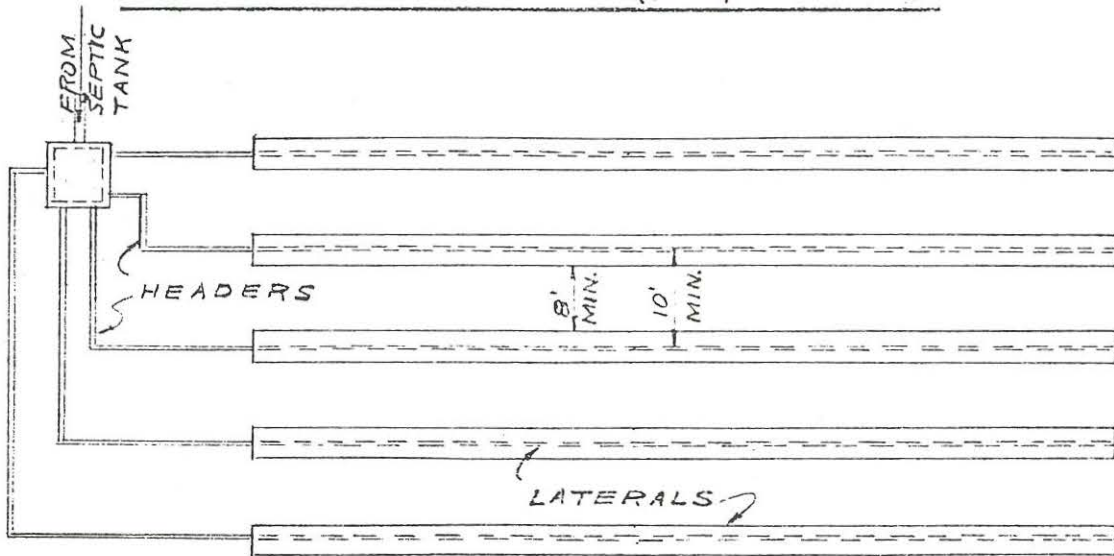


Diagram 2 (Revised)
EQUAL DISTRIBUTION SYSTEM

Diagram 3A (Revised)

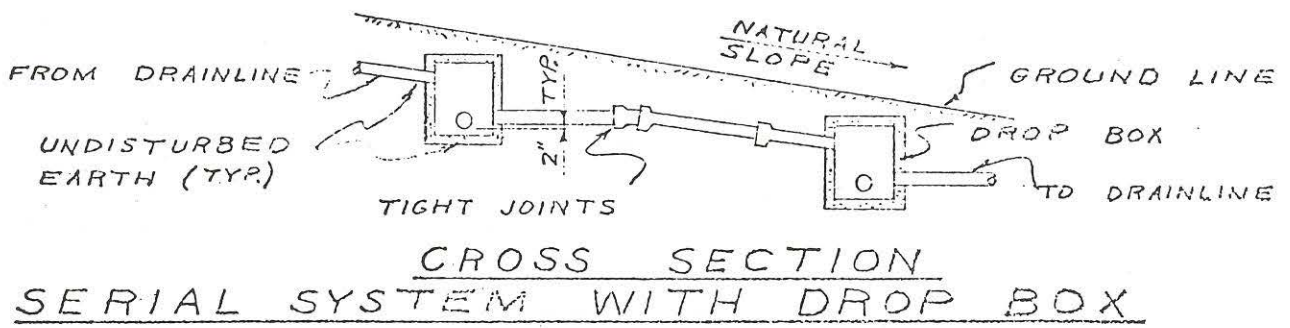
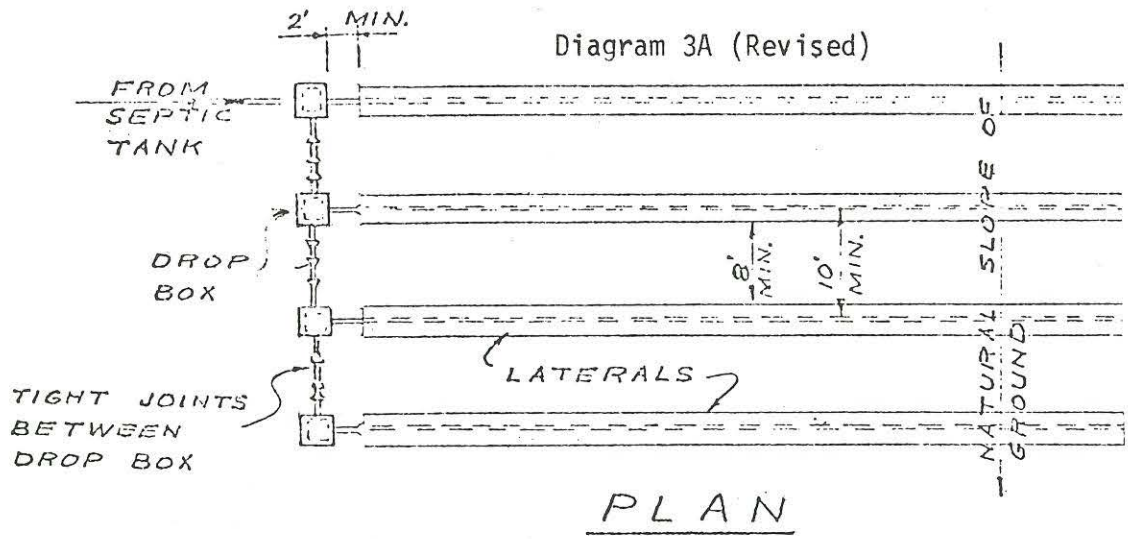
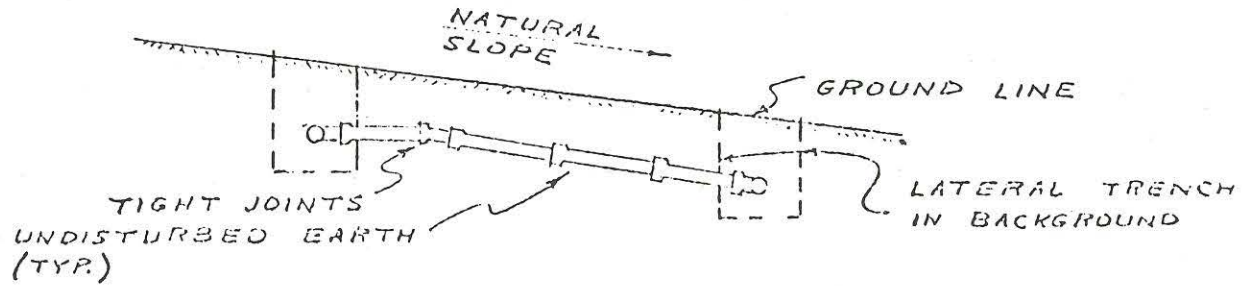
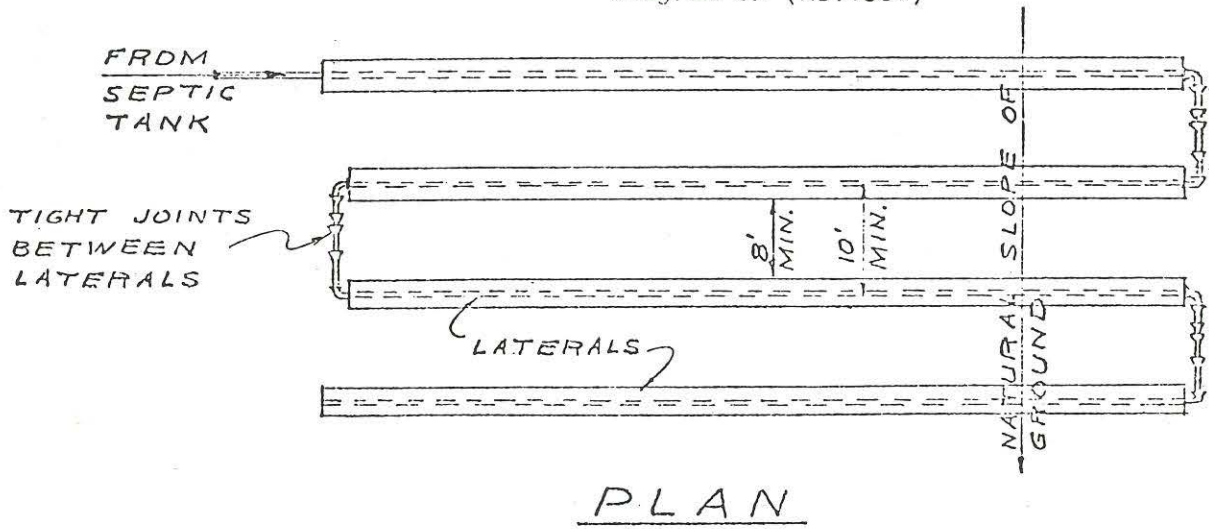


Diagram 3B (Revised)



SERIAL SYSTEM WITHOUT DROP BOX

B. Distribution Boxes

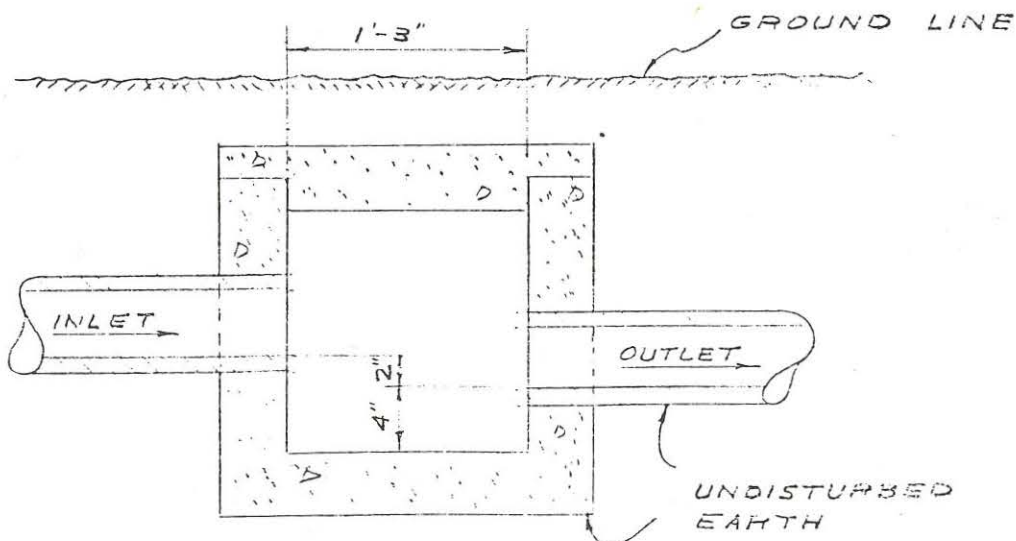
[1. Outlet elevations - The invert elevation of all outlets shall be the same, and shall be at least two (2) inches below the inlet.]

[2. Sump - The distribution box shall be provided with a sump extending four (4) inches below the bottom of the outlet pipe.]

[3. Size - The inside horizontal dimensions measured at the bottom of the box shall be a minimum of fifteen (15) inches. No distribution box shall be installed with a top surface area greater than the bottom surface area.]

1. [4.] Construction - [Distribution boxes shall be constructed of concrete or other durable material approved by the Department. They shall be watertight and designed to accommodate the necessary distribution laterals.] Construction of distribution boxes shall comply with the minimum standards set forth in Appendix B.

2. [5.] Foundation - All distribution boxes shall be bedded on undisturbed earth as shown in Diagram 4.



DISTRIBUTION BOX CROSS SECTION

Diagram 4

VIII. NONWATER-CARRIED WASTE DISPOSAL FACILITIES

A. All nonwater-carried waste disposal facilities shall comply with the following requirements:

1. No nonwater-carried waste disposal facility shall be installed without prior permit of the Director or his authorized representative.

2. No nonwater-carried waste disposal facility shall be used for dwellings having a water supply connection. The Director or his authorized representative may allow the use of nonwater waste disposal facilities for temporary or limited usages, such as recreation parks, isolated individual camp sites, labor camps, places of employment, or on construction sites, if all liquid wastes can be handled in a manner to prevent a public health hazard and to protect the public waters of the state.

3. No water-carried sewage shall be placed in nonwater-carried waste disposal facilities.

4. Separation Distances - No nonwater-carried disposal facilities shall be installed closer than the following distances from the items below:

	<u>Self-contained Nonwater-carried Waste Disposal Facility</u>	<u>Unsealed Earth Pit Type Privies</u>
Groundwater supplies including wells, springs and cisterns	50 [25] ft.	100 ft.
Surface Public Waters or Intermittent Stream	50 [25] ft.	100 ft.
Property Line	25 ft.	25 ft.

5. Maintenance - All nonwater-carried waste disposal facilities shall be maintained in a manner to prevent the occurrence of a

public health hazard or to prevent degradation of [adversely affect] the quality of public waters.

6. A building housing any nonwater-carried waste disposal facility shall be firmly anchored and rigidly constructed.

7. All nonwater-carried waste disposal facilities shall be constructed in accordance to the requirements given in Appendix F, which by this reference is incorporated herein.

B. Unsealed Earth Pit Type Privy - All unsealed earth pit type privies shall comply with the following requirements:

1. The [zone of saturation] water table or [a] temporarily perched [liquid] ground water [body] shall not be closer than four (4) feet below the maximum depth of the privy.

2. The privy shall be located and constructed in a manner to eliminate the entrance of surface water into the pit, either as runoff or as flood water.

3. When the pit becomes filled to within sixteen (16) inches of the ground surface, a new pit shall be excavated and the old one shall be backfilled with at least two (2) feet of earth.

C. Self-Contained Nonwater-Carried Waste Disposal Facilities.

1. The contents of a self-contained nonwater-carried waste disposal facility shall not be permitted to overflow onto the surface of the ground or otherwise cause a public health hazard or adversely affect public waters.

2. Standards required to be met for the construction of self-contained nonwater-carried waste disposal facilities are found in Appendix F, which by this reference are incorporated herein.

3. All buildings housing self-contained nonwater-carried waste disposal facilities shall be constructed according to the standards for unsealed earth pit type privies in these rules.

IX. SEWAGE DISPOSAL SERVICE

A. License Required. No person shall construct or pump out or clean subsurface sewage disposal systems or pump out or clean nonwater-carried waste disposal facilities without first obtaining a license from the Department.

B. Misuse of Registration - No person operating a sewage disposal service shall permit anyone to operate under his [registration] license, except an employee who is paid a wage by the [registered] licensed person and is working under the supervision of said [registered] licensed and bonded person. No person shall:

1. Display or cause or permit to be displayed or have in his possession any [registration certificate] license, knowing it to be fictitious or to have been cancelled, revoked, suspended, or fraudulently altered.

2. Fail or refuse to surrender to the Department, upon demand, any [registration certificate] license which has been suspended, cancelled or revoked.

3. Use a false name or give a false or fictitious address in any application for any such [registration certificated], license or any renewal or duplicate thereof, or knowingly give a false age, or make a false statement, or knowingly conceal a material fact or otherwise commit a fraud in any such application.

C. Revocation of Certificate - When a ["Certificate of Registration for Sewage Disposal Service,"] license which had been issued by the Department is revoked, cancelled, or expired, the operator shall remove from display:

[1. The Registration Certificate.] the license and [2] all identifying labels on trucks which were furnished by the Department.

A sewage disposal service shall not be considered for re-licensure for a period of at least one (1) year after revocation of its license.

D. Minimum specifications for pumping equipment - All pumping equipment shall comply with the following requirements:

1. Tanks and other containers used for the conveyance of the contents of cesspools, septic tanks, or privies shall have a liquid capacity of at least 550 gallons, be of watertight metal construction, fully enclosed, strong enough for all conditions of operation, and shall be provided with suitable covers so that there will be no spillage.
2. The tank truck shall be equipped with either a vacuum or other type of pump which will not allow any seepage from the diaphragm or other packing glands and which will be self priming.
3. Sewage hose on trucks shall be thoroughly drained, capped, and stored in such a manner that the contents will not create a health hazard or nuisance.
4. The discharge nozzle shall be so located that there is no flow or drip onto any portion of the truck.
5. The discharge nozzle shall be threaded and shall be capped when not in use.
6. Spreader gates on tank shall be prohibited.
7. Each truck shall at all times be supplied with a pressurized wash water tank, disinfectant, and implements needed for cleanup purposes.
8. Pumping equipment shall not be used for any other purpose.

E. Equipment Operation and Maintenance

1. When in use, pumping equipment shall be so operated that a health hazard or a nuisance will not be created.
2. When not in use and parked, all such equipment shall be covered or protected so that an odor or nuisance will not be caused.
3. Equipment shall be maintained in a reasonably clean condition at all times.

F. Personnel Responsibilities

The person or persons doing the actual cesspool, septic tank, or privy cleaning operation shall avoid spilling, pumping, or dumping the contents of the said cesspool, septic tank, or privy in the immediate vicinity of the operation or the highway when transporting the contents for dumping. Any accidental spillage on the ground around the operation shall be cleaned up by the operator and disinfected in such a manner as to render it harmless to humans and animals.

G. Trucks-Identification - [The name under which the business is conducted and the business address of the sewage disposal services shall be painted on each side of every operated tank truck. The lettering shall be at least three (3) inches high. Labels issued by the Department for each current registration period shall be displayed at all times on both sides of each tank truck while it is being operated in the State of Oregon. Such labels shall be placed on cab doors below windows on both sides of vehicle and shall be maintained in a legible condition.] The licensee must display by attached decal, placard, or sign on each side of every tank truck cab, in letters not less than three (3) inches in height and in a color contrasting with the background, the name or duly

adopted assumed business name of the license holder as listed on the license and also the business address. 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 the United States Department of Transportation Regulations, Title 49 U. S. C.

H. Disposal of Privy, Chemical Toilet, Cesspools and Septic Tank Contents

Every person [registered] licensed by the Department to engage in sewage disposal service is required in the pumping out and cleaning out of cesspools and septic tanks and privies, chemical toilets and other non-water carried waste sludges or in the transportation of domestic or industrial sludges from same, shall:

1. Discharge no part of the contents upon the surface of the ground.
2. Dispose of such pumpings only in disposal facilities or treatment facilities authorized by the Department and operating under permits issued by the Department. Disposal can be conducted at other locations and by approved methods in which written authorization has been obtained from the Department.
3. Effectively monitor the pumping and disposal operations, maintain records of data required by the Department, submit the required data to the Department quarterly unless otherwise agreed to by the Department. Data collected shall be submitted to the Department on forms provided by the Department and shall include, but not necessarily be limited to, the following:
 - a. Source of all material pumped on each occurrence, including name and address of source.

- 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, operating under permit or authorization of the Department, where pumpings were deposited on each occurrence.
 - e. Quantity of material deposited on each occurrence.
4. Transport the contents in a manner that will not create a nuisance or health hazard.

APPENDIX A

Standards For

Septic Tank Construction

X. Appendices

I. Septic tanks may have single or multiple compartments which shall be constructed in the following manner:

A. Liquid Depth - The liquid depth of any septic tank or compartment thereof shall not be less than thirty (30) inches. A liquid depth of greater than seventy-two (72) inches shall not be considered in determining liquid capacity. The tank may be oval, circular, rectangular, or square in plan, provided the distance between the inlet and outlet of the tank is at least equal to the liquid depth of the tank.

B. Compartments

1. No compartment of any tank shall have an inside horizontal dimension of less than twenty-four (24) inches, nor a liquid depth of greater than seventy-two (72) inches.

2. No tank shall have an excess of four (4) compartments.

3. The second compartment shall have a minimum liquid capacity at least equal to one-third of the capacity of the first compartment.

C. Materials

1. Septic tanks shall be of watertight construction below the liquid level and either of concrete or of not less than [twelve (12)] fourteen (14) gauge steel or of other material approved by the Department. When steel is used it shall be covered inside and out with asphalt or other protective coatings, meeting U. S. Department of Commerce Commercial Standards CS 177-62, effective January 1962, Sections 5.3.1 through 5.3.4.4 as shown in

Appendix G, or other coatings of equal performance approved by the Department. Precast concrete tanks shall have a minimum wall, compartment, and bottom thickness of two and one-half (2-1/2) inches, and shall be adequately reinforced.

2. Cast-in-place concrete tanks, precast concrete tanks, and steel tanks shall be constructed and reinforced to withstand all loads imposed upon the walls and bottom, and a live load of not less than 500 pounds per square foot on the tank top. The top of the cast-in-place and precast concrete tanks shall be at least four (4) inches thick.

NOTE: Diagram (1) shows recommended sidewall thickness, bottom thickness, and reinforcement for cast-in-place tanks as well as [.F] for septic tanks that are installed beneath a road or driveway [, refer to Diagram (2)].

3. Where concrete block tanks are permitted by the Director or his authorized representative, the tanks shall be constructed of heavy-weight concrete block, eight (8) inch minimum thickness, laid on a four (4) inch poured foundation slab. The mortared joints shall be well filled. All block holes or cells shall be filled with mortar or concrete. "k" webbing shall be installed at every third row of block. No. 3 re-bar shall be installed vertically in every block. The interior of the tank shall be surfaced with two (2) one-quarter (1/4) inch thick coats of Portland cement-sand plaster or waterproof asphalt emulsion. If [the] any portion of the tank is installed [within the liquid water] below the water table level, the outside of the tank shall be surfaced in a similar manner. The first row of blocks shall be keyed or doweled to the concrete foundation.

4. The Department shall review and approve specific specifications and manufacturers of tanks of other materials, and when such specific approval is granted, the Director or his authorized representative shall allow the installation of such tanks.

5. The inlet and outlet connection shall be located at opposite ends of the tank, shall be cast-iron soil pipe, or other materials approved by the Department which show equal performance, at least four (4) inches in diameter, and shall extend below and above the liquid level as required in this section.

6. The invert of the inlet shall be not less than one (1) inch and preferably three (3) inches above the invert of the outlet line.

7. The inlet pipe shall be a [hubbed cast-iron] long turn elbow extending at least six (6) inches below the liquid level and be of cast-iron or other material approved by the Department. The cast-iron elbow shall be attached to a steel tank by a rubber or synthetic rubber ring seal and compression plate, or in some other manner approved by the Department.

8. The outlet pipe of the tank shall be a [hubbed cast-iron] "tee" extending below the liquid level to a distance equal to forty (40) percent of the liquid depth and at least six (6) inches above the liquid in order to provide scum storage. The tee shall be of cast-iron or other material approved by the Department. [The] A cast-iron "tee" shall be attached to a steel tank by a rubber or synthetic rubber ring seal and compression plate, or in some other manner approved by the Department.

<u>Liquid Depth in Septic Tank</u>	<u>Depth of Outlet "tee" Below Flow Line</u>
4 feet	19 inches
5 feet	24 inches
6 feet	29 inches

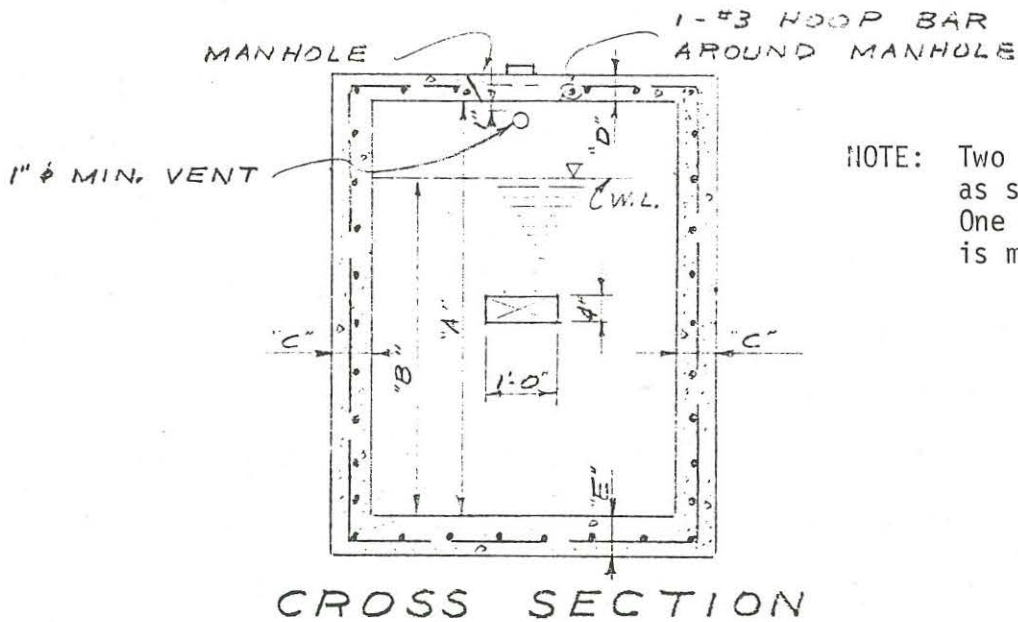
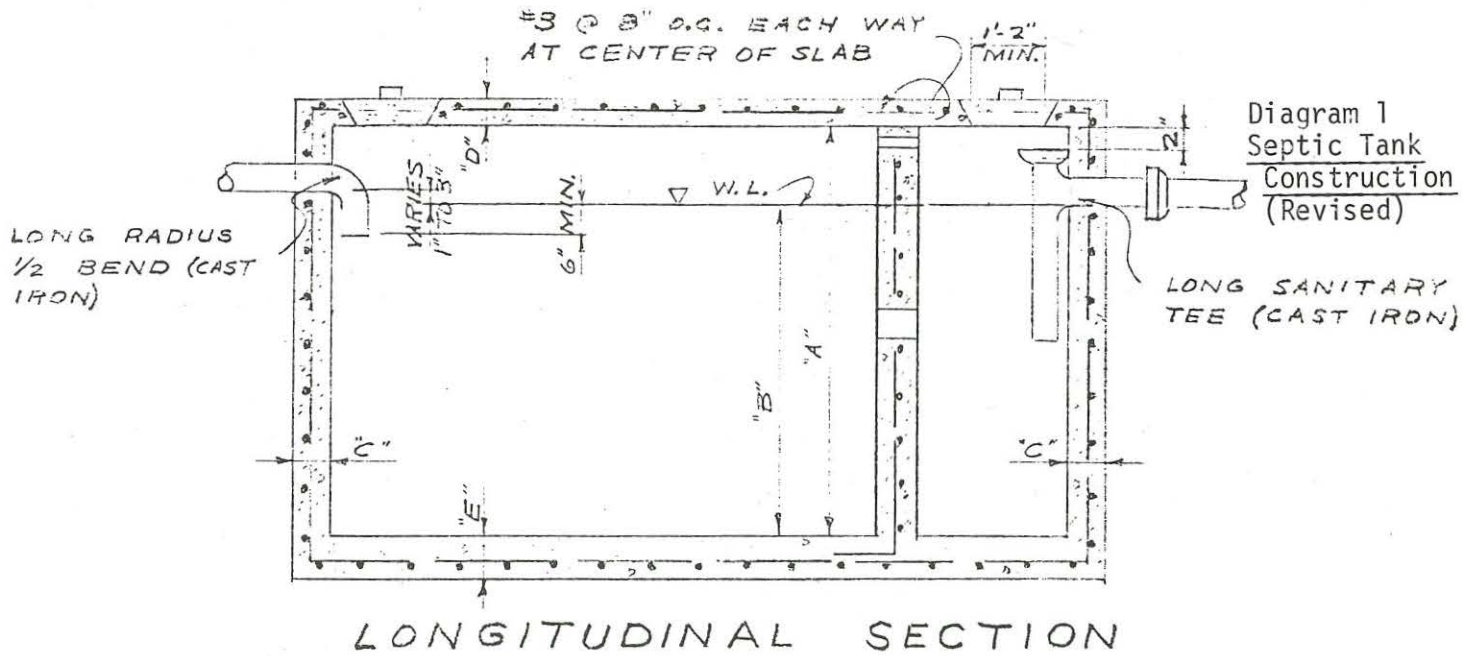
The opening between compartments shall be four (4) inches by twelve (12) inches, or its equivalent. The top of the opening shall be at the same level as the total depth of the outlet "tee".

9. At least 10 per cent of the inside volume of the tank shall be above the liquid level to provide scum storage.

10. Ventilation shall be provided through the outlet connection by means of at least a two (2) inch space between the underside of the top of the tank and the top of the "tee" fitting. Ventilation between compartments shall be provided by a hole or space at least one (1) inch in diameter in the compartment divider wall one (1) inch below the top of the tank.

11. All prefabricated or precast septic tanks shall have markings on the uppermost face of the tank when installed for use which indicate the total liquid capacity of the tank and either the manufacturer's name or the number which has been assigned by the Department.

12. Adequate access to each compartment of the tank for inspection shall be provided by a manhole, not less than fourteen (14) inches square or equivalent, one over the inlet and one over the outlet of the tank.



NOTE:
1. TOP SLAB (D) SHALL BE 6" MIN. WHEN USED FOR DRIVEWAYS.
2. CONSULT A REGISTERED ENGINEER FOR DESIGN & SUPERVISION OF CONSTRUCTION WHEN SINGLE AXLE LOAD EXCEEDS 6,000 LBS.

N.O. BEDROOMS	TOTAL WORKING CAPACITY (GALS.)	TOTAL WORKING CAPACITY (CU. FT.)	TOTAL DEPTH	LIQUID DEPTH	CONC. THICKNESS			FIRST COMPARTMENT				SECOND COMPARTMENT				CONCRETE CUBIC YARDS
					WALLS	TOP	BOTTOM	WORKING CAPACITY (GALS.)	WORKING CAPACITY (CU. FT.)	LENGTH	WIDTH	WORKING CAPACITY (GALS.)	WORKING CAPACITY (CU. FT.)	LENGTH	WIDTH	
1	1000	133	5'-0"	4'-0"	6"	4"	6"	750	100	6'-0"	4'-0"	250	33	2'-0"	4'-0"	3.20
2	1000	133	5'-0"	4'-0"	6"	4"	6"	750	100	6'-0"	4'-0"	250	33	2'-0"	4'-0"	3.20
3	1200	160	5'-0"	4'-0"	6"	4"	6"	900	120	6'-8"	4'-6"	300	40	2'-6"	4'-6"	3.56
4	1333	177	5'-6"	4'-6"	8"	5"	6"	1000	133	6'-8"	4'-6"	333	44	2'-6"	4'-6"	4.63
5	1667	233	6'-0"	5'-0"	8"	5"	6"	1250	167	6'-8"	5'-0"	417	46	2'-6"	5'-0"	5.61

APPENDIX B

Dosing Tanks [and] Effluent Lift Pumps and Distribution Boxes

I. DOSING TANKS

A. Siphons and Pumps - Siphons and pumps shall be of the alternating type when the total volume of waste to be disposed of exceeds 5,000 gallons per day. They shall operate automatically and shall discharge to separate disposal areas of equal size.

B. Capacity - Dosing tanks shall have a capacity equal to the volume required to cover the disposal area being dosed to a depth of not less than one-fourth (1/4) inch nor more than two (2) inches within fifteen (15) minutes.

C. Foundation - Dosing tanks shall be constructed on a level stable base that will not settle.

D. Inlet and Outlet - The inlet shall be above maximum water elevation in the tank. The outlet shall conform with the requirements of the manufacturer of the dosing tank siphon.

E. Manholes - Manholes shall be installed to provide access and to facilitate repair or adjustment of the siphon or pump in all dosing tanks. Manholes shall be brought up to ground surface.

II. EFFLUENT LIFT PUMPS

A. Pump

1. Pump capacity shall be no more than 15 gallons per minute unless it can be demonstrated that a greater rate may be accommodated by the drainfield with a reasonable factor of safety. Minimum capacity shall be 10 gallons per minute.
2. Pumps shall be capable of passing a 3/4 inch solid sphere and shall have a minimum 1-1/4 inch discharge.
3. Pumps may be oil filled submersible pumps or vertically-mounted column pumps.
4. Impellers shall be of cast-iron, bronze or other corrosion-resistant metal.
5. Level control shall be by mercury float switch.

B. Pressure Line

1. A [check] gate valve shall be installed in the pressure line and a [gate] check valve shall be installed between the pump and the [check] gate valve.
2. The pressure line shall be constructed of piping material of a bursting pressure of at least 100 psi and shall be of corrosion-resistant material.
3. The pressure line shall be bedded in 3-inches of sand or pea gravel.
4. The discharge of the pressure line shall be baffled or otherwise controlled to ensure even distribution of effluent to the drain lines.

C. Pump Sump

1. The sump shall be constructed of corrosion-resistant material of sufficient strength to withstand the soil pressures related to the depth of the sump.
2. Capacity of the sump shall be no less than 50 gallons, and shall be sized to provide between 3 and 6 pumping cycles per day.
3. Sumps shall be provided with a maintenance access manhole at the ground surface or above and of at least 24-inch diameter with a durable cover.

III. Distribution Boxes

A. Outlet elevations - The invert elevation of all outlets shall be the same, and shall be at least two (2) inches below the inlet.

B. Sump - The distribution box shall be provided with a sump extending four (4) inches below the bottom of the outlet pipe.

C. Size - The minimum inside horizontal dimensions measured at the bottom of the box shall be [a minimum of fifteen (15)] eight (8) inches and the box shall have a minimum inside bottom surface area of 160 inches square. No distribution box shall be installed with a top surface area greater than the bottom surface area.

D. Construction - Distribution boxes shall be constructed of concrete or other durable material approved by the Department. They shall be water-tight and designed to accommodate the necessary distribution laterals.

E. Cover - Distribution boxes shall show the manufacturer's name and address on the top, and all manufacturers shall state, in writing, to the Department that the products to be distributed for use in absorption facilities within the State of Oregon will meet all of the requirements of this section.

APPENDIX C

Redundant Disposal Field System

A redundant disposal system shall contain two (2) complete disposal fields, the effective sidewall area of each one of which shall be adequate for the establishment served. There shall be a minimum separation of ten (10) feet between the adjacent sidewalls of any two disposal trenches designed to operate simultaneously, and a minimum of four (4) feet of undisturbed earth separating the adjacent sidewalls of any two adjoining disposal trenches. Disposal trenches shall be laid out as in Diagram 2, so that the disposal trenches of each system alternate with the disposal trenches of the other system, and no two adjoining disposal trenches are designed to operate simultaneously. If a failure occurs in the original system, e.g., disposal field 1 in Diagram 2, the effluent shall be diverted away from the original to the repair system, e.g., disposal field 2 in Diagram 2.

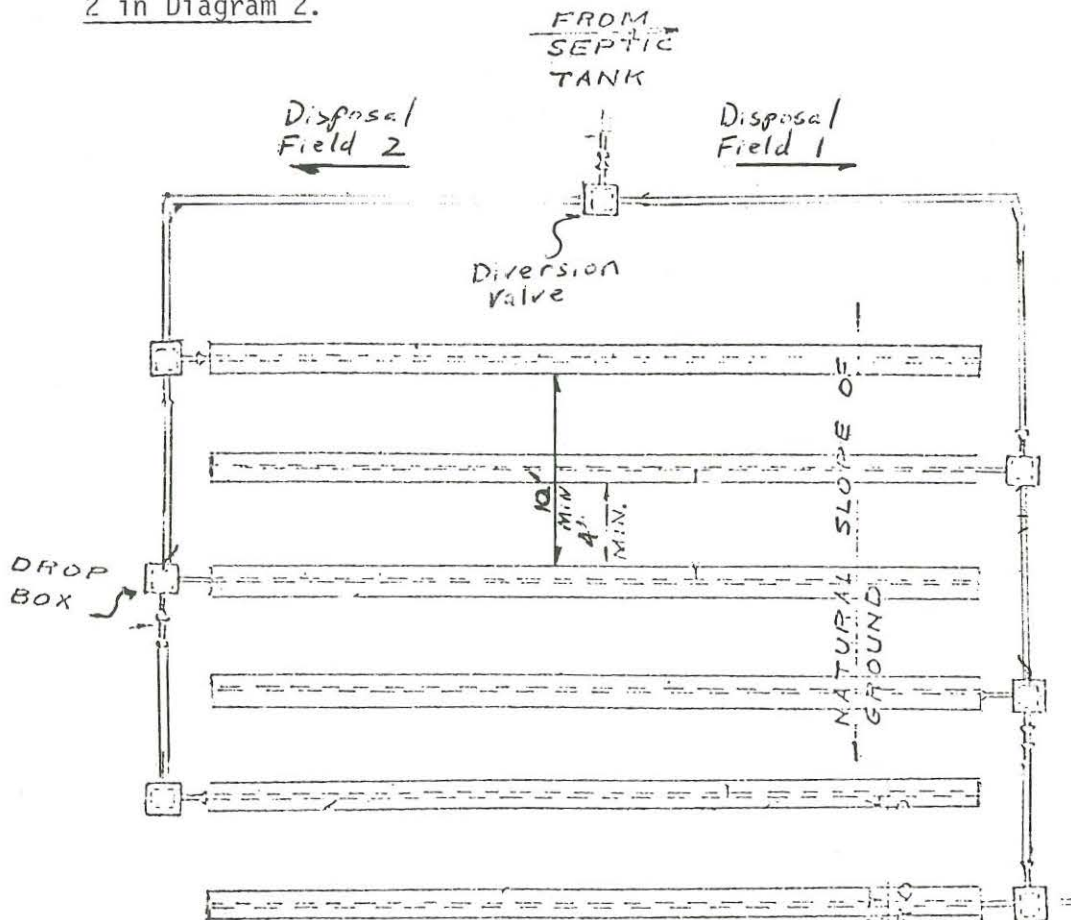


Diagram 2

APPENDIX D

Standards for Seepage Pits and Cesspools

I. Construction

A. The liquid capacity of a seepage pit or cesspool shall be at least equal to the calculated volume of the required septic tank capacity for the dwelling or establishment served.

B. The minimum inside diameter of the lining shall be four (4) feet.

C. Two or more seepage pits shall be separated from each other by a distance equal to twelve (12) feet of undisturbed earth.

D. The seepage pit or cesspool shall be lined with stone, fired clay brick, building tile, adequately reinforced perforated precast concrete rings at least two and one-half (2-1/2) inches thick, or other material approved by the Department. A six (6) inch space shall be required between the lining of the pit and the soil, and it shall be backfilled with clean, coarse rock.

E. The inlet pipe of the seepage pit or cesspool shall be an elbow which extends downward a minimum of twelve (12) inches.

APPENDIX E

Standards For

Pipe Materials and Construction

I. Building Sewer and Effluent Sewer

A. The building sewer and effluent sewer shall be constructed with materials in conformance to building sewer standards in the Oregon State Plumbing Laws and Administrative Rules.

II. Distribution Pipe

A. Plastic pipe.

1. Styrene-rubber plastics used for pipe and fittings shall meet ASTM (American Society for Testing and Materials) Specification D 2852-72 and Sections 5.5 and 7.8 of Commercial Standard 228-61, published by the U.S. Department of Commerce, which are designated Appendix G and H, respectively, and by this reference are made a part of these regulations. Pipe and fittings shall also pass a deflection test withstanding 350 pounds/foot without cracking by using the method found in ASTM 2412. In addition to the markings required by ASTM 2852-72, each manufacturer of styrene-rubber plastic pipe shall state, in writing, to the Department that he certifies that the pipe to be distributed for use in absorption facilities within the State of Oregon will comply with all requirements of this section.

2. Polyethylene pipe in 10-foot lengths of which pipe and fittings shall meet Commercial Standard 228-61, published by the Department of Commerce, which is designated Appendix H and by this reference is made a part of these regulations. Pipe and fittings shall also pass a

deflection test withstanding 350 pounds per foot without cracking by using the method found in ASTM 2412. Each length of pipe and each fitting shall be marked with the nominal size, the manufacturer's name or trademark, or other symbol which clearly identifies the manufacturer and the Commercial Standard number above. Markings on pipe shall be located on the uppermost surface when properly installed and at intervals of not greater than 10 feet. In addition to the markings required above, each manufacturer of polyethylene pipe shall state, in writing, to the Department that he certifies that the pipe to be distributed for use in absorption facilities within the State of Oregon will comply with all requirements of this section.

3. The two types of plastic pipe described above shall have two (2) rows of holes spaced one hundred twenty (120) degrees apart and sixty (60) degrees on either side of a center line. A line of contrasting color shall be provided on the outside of the pipe the full length along the line furthest away and parallel to the two rows of perforations. The holes of each row shall be not more than five (5) inches on center and shall have a minimum diameter of one-half (1/2) inch.

B. Concrete tile in twelve (12) inch lengths which meets ASTM (American Society for Testing and Materials) Specification C 412-65 which is designated Appendix I and by this reference is made a part of these regulations. Tile used as part of an absorption facility shall bear the ASTM number above and some identification as to which quality standard it meets (Standard-Quality, Extra-Quality, or Special-Quality). In addition to the markings required above, each manufacturer of concrete tile shall state in writing to the Department that he certifies that the pipe to be

distributed for use in absorption facilities within the State of Oregon will comply with all of the requirements of this section.

C. Vitrified clay drain tile in twelve (12) inch lengths that meets ASTM (American Society for Testing and Materials) Specification C 4-62 which is designated Appendix J and by this reference is made a part of these regulations. Tile used as part of an absorption facility shall bear the ASTM number above and some identification as to which quality standard it meets (Standard, Extra-Quality, Heavy-Duty). In addition to the markings required above, each manufacturer of clay tile shall state, in writing, to the Department that he certifies that the pipe to be distributed for use in absorption facilities within the State of Oregon will comply with all of the requirements of this section.

D. Bituminized fiber of which both pipe and fittings must meet ASTM (American Society for Testing and Materials) Specification D 1861-69 which is designated Appendix K and by this reference is made a part of these regulations. Each length of pipe and each fitting shall be marked with the nominal size, the manufacturer's name or trademark, or other symbol which clearly identifies the manufacturer and the ASTM standard number above. Markings on pipe shall be spaced at intervals not greater than two (2) feet. In addition to the markings required above, each manufacturer of bituminized pipe shall state, in writing, to the Department that he certifies that the pipe to be distributed for use in absorption facilities within the State of Oregon will comply with all requirements of this section. In addition, all bituminized pipe that is to be installed as part of an absorption facility shall comply with the following requirements:

The pipe shall have two rows of holes spaced one hundred twenty (120) degrees apart and sixty (60) degrees on either side of a center line. A line of contrasting color shall be provided on the outside of the pipe the full length along the line furthest away and parallel to the two rows of perforation. The holes of each row shall not be more than five (5) inches on center and shall have a minimum diameter of one-half (1/2) inch.

APPENDIX F

Standards For

Nonwater-Carried Waste Disposal Facility Construction

I. Unsealed Earth Pit Type Privy

A. The pit shall be constructed of such material and in such a manner as to prevent rapid deterioration, provide adequate capacity, and facilitate maintenance in a satisfactory manner under ordinary conditions of usage.

B. The pit and seat area shall be vented by a flue or vent pipe having [not less than fifty (50) square inches cross-sectional area so as to provide a continuous escape of odors] an inside diameter of not less than four (4) inches.

C. The pit shall provide a capacity of fifty (50) cubic feet for each seat installed in the privy building and shall be at least five (5) feet deep. The area within sixteen (16) inches of the surface grade shall not be counted as part of the fifty (50) cubic-foot capacity.

D. Pit cribbing shall fit firmly and be in uniform contact with the earth walls on all sides, and shall rise at least six (6) inches above the original ground line and descend to the full depth of the pit. However, pit cribbing below the soil line may be omitted in rock formations.

E. An earth plateau shall be constructed level with the top of the pit cribbing, and extend horizontally for a distance of at least eighteen (18) inches from sloping of the original ground level.

F. A building housing any non-water-carried waste disposal facility shall be firmly anchored and rigidly constructed in the following manner. It shall be free from hostile surface features, such as exposed nail points, sharp edges, rough or broken boards, etc., and shall provide privacy and

protection from the elements. [It shall be ventilated by leaving a four (4) inch opening at the top of all the walls just beneath the roof.] It shall be provided with vents equal in area to at least one-fifth (1/5) of the floor area or a minimum of three (3) square feet. Ventilation shall be equally divided between the bottom half of the room and the top half of the room.

1. The building shall be of fly-tight construction, doors shall be self-closing, and all vents shall be screened with sixteen (16) mesh screen of durable material. The vent shall extend twelve (12) inches above the roof.
2. The seat shall be so spaced as to provide a minimum clear space of twenty-four (24) inches between each seat in multiple-unit installations, and shall provide twelve (12) inches clear space from the seat opening to each side wall in single and multiple units.
3. The seat riser shall have an inside clearance of not less than twenty-one (21) inches from the front wall [and not less than twenty-four (24) inches from the rear wall] of the privy building.
4. The seat opening shall be covered with an attached, movable toilet seat and lid that can be raised to allow sanitary use as a urinal. [When the seat is closed it shall eliminate access to insects.]
5. The floor and riser shall be built of impervious material or tongue and groove lumber, and in a manner to deny access of insects.
6. The seat top shall be not less than 12 inches nor more than 16 inches above the floor.

II. Self-Contained Nonwater-Carried Waste Disposal Facilities

A. Vault Privies

1. All vault privies shall have vaults and receptacles which are watertight of a minimum capacity of three hundred fifty (350) gallons or, in place of employment, 100 gallons per seat, and shall be constructed of reinforced concrete, plastic, metal, or other material of equal durability which has been approved by the Department.

2. The addition to the vault of caustic chemicals or disinfectants is required at frequent intervals to prevent bacterial decomposition and resulting odors.

B. Chemical Toilets

1. All wastes are held within the body of the toilet for removal when filled to capacity.

2. Receptacles for caustic shall be durable and corrosion proof, and provide a minimum capacity of 100 gallons per seat.

C. Portable Toilet Specifications

1. A portable toilet may be made up of the seat and its treatment unit to be installed in a structure, or it may be made up of an entire prefabricated, skid mounted, or otherwise portable structure containing a seat or treatment units with seat.

2. No pit, tank, or other subsurface structure shall be construed as part of a portable toilet.

a. Portable privies must be installed over a pit conforming to the requirements of this section, or a manhole that is part of a sanitary or combined waste water disposal system.

b. No portable toilet shall discharge into a storm sewer or into any waters of the state.

3. An airtight seal shall be provided between the structure base of any pit, receptacle, or manhole over which it is placed.

4. A portable toilet shall be provided with facilities, requisite to its construction, for the removal of chemicals, ash, or residue. All surfaces subject to soiling shall be readily accessible and easily cleaned.

Commercial Standard CS 177-62, January 1962

United States Department of Commerce

5.3 Bituminous coatings

5.3.1 *Coating requirements.*—The coating shall be composed of bituminous-base materials that are impervious to water and resistant to sulfuric and sulfurous acids of concentrations encountered in the normal operation of septic tanks. The physical characteristics of the materials shall be such that they are capable of being applied in a continuous coating which is free from bubbles, pinholes, holidays, etc. They shall have good adherence to the metal, and shall permit handling incidental to shipping and installation at temperatures between 30° and 140° F without separating from the metal or showing appreciable flow or stickiness.

5.3.2 *Coating systems.*—Two coating systems are acceptable as follows:

System I.—Hot-dipped asphalt coating applied to the bare metal or over an asphalt primer, followed by a coal-tar-base emulsion coating applied to the critical area.

System II.—Cold-application coal-tar-base coating to the bare metal or over a coal-tar primer, followed by a second application of coating to the critical area.

5.3.3 *Materials.*—Materials shall meet requirements for the applicable system, as follows:

System I.

(a) *Asphalt for hot-dipped coatings.*—The material shall comply with the requirements of Underwriters' Laboratories, Inc., for Asphalt Coating—System I.² Softening point shall not be lower than 185° F nor higher than 210° F; penetration (hundredths of a centimeter) shall be not less than 20 at 0° C; not less than 25 nor more than 50 at 25° C; and not greater than 100 at 46° C.

(b) *Asphalt primer, when used.*—Suitable primer shall be furnished by the manufacturer of asphalt coating.

(c) *Coal-tar-base emulsion.*—The material shall comply with the requirements of Underwriters' Laboratories, Inc., for Coal-Tar-Base Emulsion—System I.²

System II.

(a) *Coal-tar-base coating.*—The material shall comply with the requirements of Underwriters' Laboratories, Inc., for Coal-Tar-Base Coating—System II.²

(b) *Coal-tar primer, when used.*—Suitable primer shall be furnished by the manufacturer of the coal-tar-base coating.

5.3.4 *Coating procedure.*

5.3.4.1 *Preparation of tanks.*—Prior to coating, the metal shall be free from all loose scale, rust, oil and grease which would prevent proper adherence of the coating. The clean tanks shall be protected from rain, snow and frost prior to coating.

5.3.4.2 *System I.*

(a) Apply asphalt primer when recommended by the manufacturer of the coating material used. Make the application in accordance with recommendations of the coating manufacturer. Allow primer to set to touch at atmospheric temperature.

(b) Submerge the tank in the hot asphalt and withdraw it from the asphalt bath at such a rate that uniform coating of asphalt not less than 0.025" in average thickness will be produced on all surfaces of the tank. The coating shall be free from air bubbles, pinholes and holidays that expose bare metal.

(c) After the tank has cooled to atmospheric temperature, apply the coal-tar emulsion to the critical area by brush or spray at a rate of not more than 60 square feet per gallon of emulsion.

² Given in publication entitled "Requirements for Bituminous Coatings for Metal Septic Tanks, Subject 70" obtainable from Underwriters' Laboratories, Inc., 207 East Ohio Street, Chicago 11, Illinois.

5.3.4.3 System II.

- (a) Apply coal-tar primer when recommended by the manufacturer of the coating material used. Make the application in accordance with recommendations of the coating manufacturer. Allow primer to set to touch at atmospheric temperature.
- (b) Apply the coal-tar-base coating uniformly by brush or spray to all exterior and interior surfaces of the tank at a rate of not more than 100 square feet per gallon. Allow to dry not less than 24 hours at atmospheric temperature. Drying may be accelerated by the use of infrared lamps or heated drying chamber, provided the coating is not heated sufficiently to affect it adversely in adherence, flexibility and other significant properties. In general, the temperature for accelerated drying should not exceed 120° F and the drying time at approximately that temperature should be between 6 and 8 hours, unless slightly higher drying temperatures, or shorter drying periods, or both, are definitely known to be suitable for the materials used.
- (c) Apply a second coat of the coal-tar-base coating to the critical area at a rate of not more than 75 square feet per gallon.

5.3.4.4 Touch up coating.—Each tank shall be provided with a pint of touch-up material. The material supplied with tanks having system I coating shall comply with the requirements of Underwriters' Laboratories, Inc., for Touch-up Coating—System I.² The material supplied with tanks having System II coating shall comply with the requirements of Underwriters' Laboratories, Inc., for Coal-Tar-Base Coating—System II.³

APPENDIX H



Designation: D 2852 - 72

**Standard Specification for
STYRENE-RUBBER PLASTIC DRAIN AND
BUILDING SEWER PIPE AND FITTINGS¹**

This Standard is issued under the fixed designation D 2852; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal.

1. Scope

1.1 This specification covers requirements and methods of test for materials, dimensions, workmanship, impact resistance, load-deflection properties, dimensional stability, and joint tightness of plain-end or bell-end styrene-rubber plastic drain and building sewer pipe and fittings in sizes 2 through 6 in.

NOTE 1—The values stated in U.S. customary units are to be regarded as the standard.

2. Terminology

2.1 The plastics terminology used in this specification is in accordance with ASTM Nomenclature D 883, Relating to Plastics² and ASTM Abbreviations D 1600, Terms Relating to Plastics,² unless otherwise indicated. The abbreviation for styrene-rubber plastics is SR.

3. Uses

3.1 The requirements for this standard are intended to provide pipe and fittings suitable for nonpressure underground drainage of sewage and certain other liquid wastes, in applications outside the building limits, where resistance to deterioration from water and chemicals, dimensional stability, resistance to aging, and strong tight joints are required. The plastic drain and sewer pipe and fittings described in this specification are intended for use in the following applications:

3.1.1 Building sewers in dwellings of four families or less.

3.1.2 House connections to septic tanks.

3.1.3 Footing drains (foundation drains).

3.1.4 Storm drainage.

NOTE 2—Industrial waste disposal lines should be installed only after careful consideration of the composition of the wastes involved, and only with the specific approval of the cognizant building code authority. Detrimental chemicals not commonly found in drains and sewers, and excessive temperatures may be encountered in industrial waste disposal lines.

3.2 The pipe should be installed in accordance with ASTM Recommended Practice D 2321, for Underground Installation of Flexible Thermoplastic Sewer Pipe.³

4. Materials

NOTE 3—A recommended list of chemicals, concentrations, and related test procedures to evaluate plastic piping materials for use in residential sewer systems is being developed and will be added to the Appendix of this specification when the work is completed. This is a particularly difficult task because of the lack of uniformity in the chemical composition of the material being transported and the lack of chemical analyses of this material. Consequently, the chemicals and the amounts present are to some extent a matter of opinion of those concerned. Investigations and discussions are underway to arrive at a consensus that can be added to all the plastic sewer piping specifications being developed in ASTM Subcommittee D-20.17. It should be noted that the consensus developed will be used to evaluate whether or not specific plastic materials are useful for residential sewer piping and not as test requirements in the body of the specifications.

4.1 *Materials*—The pipe and fittings shall

¹ This specification is under the jurisdiction of ASTM Committee D-20 on Plastics and is the direct responsibility of Subcommittee D-20.17 on Thermoplastic Pipe and Fittings functioning as a Joint Committee of The Society of the Plastics Industry and ASTM.

Current edition effective March 13, 1972. Originally issued 1969. Replaces D 2852 - 71.

² *Annual Book of ASTM Standards*, Part 27.

³ *Annual Book of ASTM Standards*, Part 26.



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be made of styrene-rubber (SR) plastics meeting the following requirements:

4.1.1 The SR plastic compound shall contain at least 50 percent styrene plastics, combined with rubbers to a minimum rubber content of 5 percent, and compounding materials such as antioxidants and lubricants, and may contain up to 15 percent acrylonitrile combined in the styrene plastics and/or rubbers. The rubbers shall be of the polybutadiene and/or butadiene-styrene type with a maximum styrene content of 25 percent and/or nitrile type. The combined styrene plastics and rubber content shall be not less than 90 percent. No fillers may be used.

4.1.2 The SR plastic compound shall meet the following minimum requirements when tested in accordance with Section 6:

Tensile strength at rupture,	26.2 MN/m ² (3800 psi)
Elongation at rupture, percent,	15
Modulus of elasticity in tension,	2068 MN/m ² (300,000 psi)
Izod impact strength, notched,	0.11 m-kg (0.8 ft.-lb)
Deflection temperature at 1.82 MN/m ² (264 psi), deg C (deg F)	65 (149)

4.1.3 *Rework Material*—Clean rework material, generated from the manufacturer's own pipe or fittings production, may be used by the same manufacturer, provided that the pipe and fittings produced meet all of the requirements of this specification.

5. Requirements

5.1 *Workmanship*—The pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions, or other injurious defects. The pipe shall be as uniform as commercially practical in color, opacity, density and other physical properties.

5.2 Pipe Dimensions:

5.2.1 *Pipe Diameters*—The outside and inside diameters of the pipe shall be within the tolerances given in Table 1 when tested in accordance with 6.6.1.

5.2.2 *Wall Thickness*—Pipe wall thickness shall meet the requirements of Table 1 when measured in accordance with 6.6.2.

5.2.3 *Laying Length*—The laying length shall be 10 ft with a tolerance of $-0 + \frac{1}{2}$ in., unless otherwise specified. The laying length shall be determined in accordance with 6.6.3.

5.3 Fitting and Bell-End Dimensions:

5.3.1 *Socket Diameters*—The inside di-

ameters of the sockets shall comply with the dimensions in Table 2 when determined in accordance with 6.7.1.

5.3.2 *Wall Thickness*—The wall thicknesses of fittings shall comply with the requirements shown in Table 2 when determined in accordance with 6.7.2. In the case of belled pipe, this thickness of the belled section shall be considered satisfactory if the bell was formed from a pipe meeting the requirements of Table 1.

5.3.3 *Socket Depth*—The socket depth shall be not less than that shown in Table 2 when measured in accordance with 6.7.3.

5.3.4 *Laying Length*—The laying length shall meet the requirements shown in Table 3.

5.4 *Impact Strength*—The impact strength of the pipe and fittings shall not be less than the values given in Table 4 when tested in accordance with 6.9.

NOTE 4—This test is intended only as a quality control test, not as a simulated service test.

5.5 *Pipe Stiffness*—The pipe stiffness at 5 percent deflection shall be not less than the values given in Table 5 when tested in accordance with 6.10. This requirement does not apply to fittings.

5.6 *Flattening*—The pipe shall show no evidence of splitting, cracking, or breaking at 20 percent deflection when tested in accordance with 6.8.

5.7 *Dimensional Stability*—The average decrease in inside diameter of pipe and fittings shall not exceed 10 percent when tested in accordance with 6.11.

5.8 *Solvent Cement*—See Note 5.

5.9 *Joint Tightness*—Joints made with pipe and fittings shall not leak when tested at an internal pressure of 170 kN/m² (25 psi) in accordance with 6.12.

NOTE 5—A specification for SR plastic pipe cement is being developed and will be referenced when it is available. In the meantime, this pipe specification will be held as tentative rather than processing as a standard because of lack of a satisfactory reference for this requirement. It is suggested that users follow the recommendation of manufacturers regarding cements until this work is completed.

6. Methods of Test

6.1 *Conditioning*—Condition the specimens prior to test at 23 ± 2 C (73.4 ± 3.6 F)



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and 50 ± 5 percent relative humidity for not less than 40 h in accordance with Procedure A of ASTM Methods D 618, Conditioning Plastics and Electrical Insulating Materials for Testing,² for those tests where conditioning is required and in all cases of disagreement.

6.2 *Test Conditions*—Conduct tests in the Standard Laboratory Atmosphere of 23 ± 2 C (73.4 ± 3.6 F) and 50 ± 5 percent relative humidity, unless otherwise specified.

6.3 *Deflection Temperature*—Determine the deflection temperature in accordance with ASTM Method D 648, Test for Deflection Temperature of Plastics under Flexural Load.² Injection mold two 6.4 by 12.7 by 127-mm ($1/4$ by $1/2$ by 5-in.) test specimens under conditions specified by the manufacturer. The test shall be made only at a stress of 1.82 MN/m^2 (264 psi). An inert immersion medium shall be used. The heating rate shall be 2 ± 0.2 C/min.

6.4 *Material Impact Resistance*—Determine the Izod impact resistance in accordance with Method A of ASTM Methods D 256, Test for Impact Resistance of Plastics and Electrical Insulating Materials.² Injection mold ten $1/8$ by $1/2$ by $2\frac{1}{2}$ -in. test specimens under conditions specified by the manufacturer. The notch shall be produced by a machining operation using a single-tooth milling cutter.

6.5 *Tensile Properties*—Determine the tensile strength, elongation at rupture, and modulus of elasticity in accordance with ASTM Method D 638, Test for Tensile Properties of Plastics.² Injection mold five Type I test specimens approximately 3.2 mm ($1/8$ in.) thick under conditions specified by the manufacturer. The speed of testing shall be 5 to 6 mm (0.20 to 0.25 in.)/min.

6.6 *Pipe Dimensions:*

6.6.1 *Pipe Diameters:*

6.6.1.1 Measure the average outside diameter of the pipe in accordance with Section 6 of ASTM Method D 2122, Determining Dimensions of Thermoplastic Pipe and Fittings.³ Use either a tapered-sleeve gage or a vernier circumferential wrap tape accurate to ± 0.02 mm (± 0.001 in.).

6.6.1.2 Measure the average inside diameter of the pipe in accordance with Section 5

of Method D 2122.

6.6.2 *Wall Thickness*—Measure the wall thickness in accordance with Method D 2122. Make sufficient readings, a minimum of six, to ensure that the minimum thickness has been determined. Use a cylindrical anvil tubing micrometer accurate to ± 0.02 mm (± 0.001 in.).

6.6.3 *Length*—Determine the over-all length of the pipe in accordance with Method D 2122 using a steel tape with at least 1-mm ($1/16$ -in.) graduations. For belled or coupled pipe, determine the laying length by measuring the bell or coupling socket depth with a steel rule with at least 1-mm ($1/16$ -in.) graduations and subtracting this dimension from the over-all length.

6.7 *Fitting and Bell-End Socket Dimensions:*

6.7.1 *Socket Diameters*—Measure the inside diameters of the sockets at the socket entrance and bottom, using an inside micrometer accurate to 0.02 mm (± 0.001 in.) or a telescoping pin gage in conjunction with an outside micrometer accurate to 0.02 mm (± 0.001 in.). Determine the average inside diameters at the entrance and the bottom of the socket by taking sufficient readings to determine the minimum and maximum at each position. Calculate the average inside diameter at each position by taking the mean of the minimum and maximum values.

6.7.2 *Wall Thickness*—Measure the wall thickness in accordance with Section 4 of Method D 2122. Make sufficient readings, a minimum of six, to ensure that the minimum thickness has been determined. Use a cylindrical anvil tubing micrometer accurate to ± 0.02 mm (± 0.001 in.).

6.7.3 *Socket Depth*—Measure the socket depth using a steel rule with at least 1-mm ($1/16$ -in.) graduations. Make sufficient readings to ensure that the minimum depth has been determined.

6.8 *Flattening*—Flatten three specimens of pipe, 6 in. long, between parallel plates in a suitable press, until the distance between the plates is 80 percent of the original outside diameter of the pipe. The rate of loading shall be uniform and such that the compression is completed within 2 to 5 min. Remove the load and examine the specimens for evidence



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of splitting, cracking, or breaking. Reversal of curvature of the surface in contact with the parallel plate before 20 percent deflection is reached shall also be deemed failure.

NOTE 6—This test may be run in conjunction with 6.10.

6.9 *Impact Strength*—Determine the impact strength of pipe and fittings in accordance with ASTM Method D 2444, Test for Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)³. Tup B at 4.5-kg (10-lb) weight shall be used, and dropped on the specimen from the selected height equivalent to the minimum impact requirements given in Table 4 for that size pipe or fitting. Test six specimens. If two or more specimens fail to meet the requirements, the pipe or fitting fails to pass this requirement. Test couplings and other in-line fittings assembled to pipe.

6.10 *Pipe Stiffness*—Determine the pipe stiffness at 5 percent deflection in accordance with ASTM Method D 2412, Test for External Loading Properties of Plastic Pipe by Parallel Plate Loading.³

6.11 *Dimensional Stability*—Cut two $6 \pm \frac{1}{8}$ -in. long test specimens cleanly from the pipe. Mark and measure a diameter on the inside on the nearest 0.02 mm (0.001 in.). Place the specimens on a flat rigid base with the measured diameter in a vertical position, and place the assembly in a circulating air

oven. Load the pair of test specimens symmetrically as shown in Fig. 1 to produce the total load for the indicated diameter as shown in Table 6. Turn on the heat in the oven and raise the temperature to 50 ± 3 C (122 ± 5.4 F). Hold the temperature there for 48 ± 1 h. Remove the load from the specimens and then remove the specimens from the oven. After cooling for 1 h, remeasure the inside diameters and calculate the average change in percent of the initial diameter.

6.12 *Joint Tightness*—Test solvent cemented joints prepared with cements and by procedures in accordance with manufacturer's recommendations and allowed to stand 24 h at room temperature. Then subject the specimen to an internal pressure of 0.17 MN/m² (25 psi) for 24 h with water as the medium. The joints shall show no leakage.

7. Marking

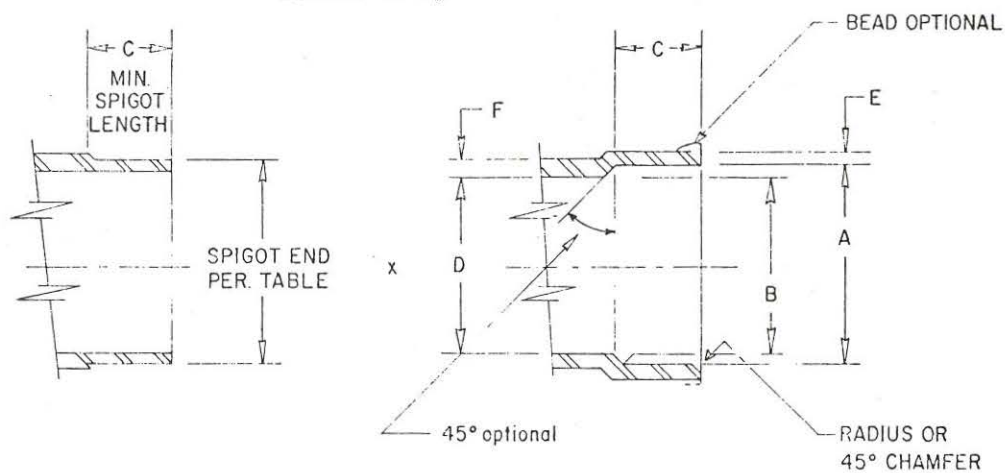
7.1 *Marking*—Each length of pipe and each fitting shall be marked with the nominal size, the manufacturer's name or trademark, or other symbol clearly identifying the manufacturer, the symbol SR for styrene-rubber plastic, and this specification number. Marking on pipe shall be spaced at intervals of not less than 2 ft. Alternatively, fittings may be marked with three dots in a triangular spacing instead of the specification number.

TABLE 1 Dimensions and Tolerances for SR Plastic Drain and Building Sewer Pipe, in.

Nominal Size	Average Outside Diameter	Permissible Deviations of the Diameter from Measured Average (Out-of-roundness)	Minimum Average Inside Diameter	Minimum Wall Thickness
2	2.250 ± 0.006	±0.030	2.000	0.073
3	3.250 ± 0.008	±0.040	2.875	0.100
4	4.215 ± 0.009	±0.050	3.875	0.125
5	5.300 ± 0.010	±0.060	4.875	0.150
6	6.275 ± 0.011	±0.070	5.875	0.180

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TABLE 2 Fitting Dimensions and Tolerances, in.



Nominal Size	A	B	C min	D min	E and F min
2	2.264 + 0.006 - 0.006	2.245 + 0.006 - 0.006	3/4	2	0.073
3	3.271 + 0.008 - 0.008	3.245 + 0.008 - 0.008	1 1/2	2 7/8	0.100
4	4.235 + 0.009 - 0.009	4.210 + 0.009 - 0.009	1 3/4	3 7/8	0.125
5	5.330 + 0.010 - 0.010	5.295 + 0.010 - 0.010	2	4 7/8	0.150
6	6.305 + 0.011 - 0.011	6.270 + 0.011 - 0.011	2 1/2	5 7/8	0.180

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TABLE 3 Fitting Minimum Laying Length Dimensions, in.
NOTE—All dimensions are in inches. The negative tolerance on these dimensions is zero.

Size	G1	G2	G3	G4	G5	H	J	N
2	1 ³ / ₃₂	1 ³ / ₄	1 ⁵ / ₁₆	2 ³ / ₄	1 ¹ / ₂	3 ⁷ / ₈	9 ¹ / ₁₆	3 ³ / ₃₂
3	1 ² / ₃₂	2 ⁷ / ₈	1 ³ / ₈	3 ¹ / ₄	9 ¹ / ₁₆	6	1 ¹ / ₁₆	1 ¹ / ₈
4	2 ⁵ / ₃₂	3 ¹ / ₁₆	1 ¹ / ₄	5	1 ⁵ / ₁₆	7 ⁷ / ₁₆	7 ⁷ / ₈	1 ¹ / ₈
5	2 ¹ / ₁₆	—	—	—	—	—	—	1 ¹ / ₈
6	3 ³ / ₁₆	—	—	7 ³ / ₈	1 ⁵ / ₁₆	—	1 ³ / ₈	1 ¹ / ₈

TABLE 4 Minimum Impact Strength Requirements of Pipe and Fittings at 23 C (73.4 F)

Nominal Size, in.	Minimum Impact	
	ft·lb	m·kg
2	10	1.4
3	10	1.4
4	15	2.1
5	15	2.1
6	15	2.1

TABLE 5 Minimum Pipe Stiffness for Pipe

Nominal Size, in.	Minimum Pipe Stiffness at 5 Percent Deflection	
	Original and Water Immersion Specimens	
	lb/in. ²	MPa
2	50	0.35
3	42	0.29
4	38	0.26
5	37	0.26
6	34	0.23

TABLE 6 Loads for Dimensional Stability Test

Nominal Size, in.	Total Load	
	lb	kg
2	55	25
3	55	25
4	55	25
5	65	29.5
6	65	29.5

ASTM D 2852

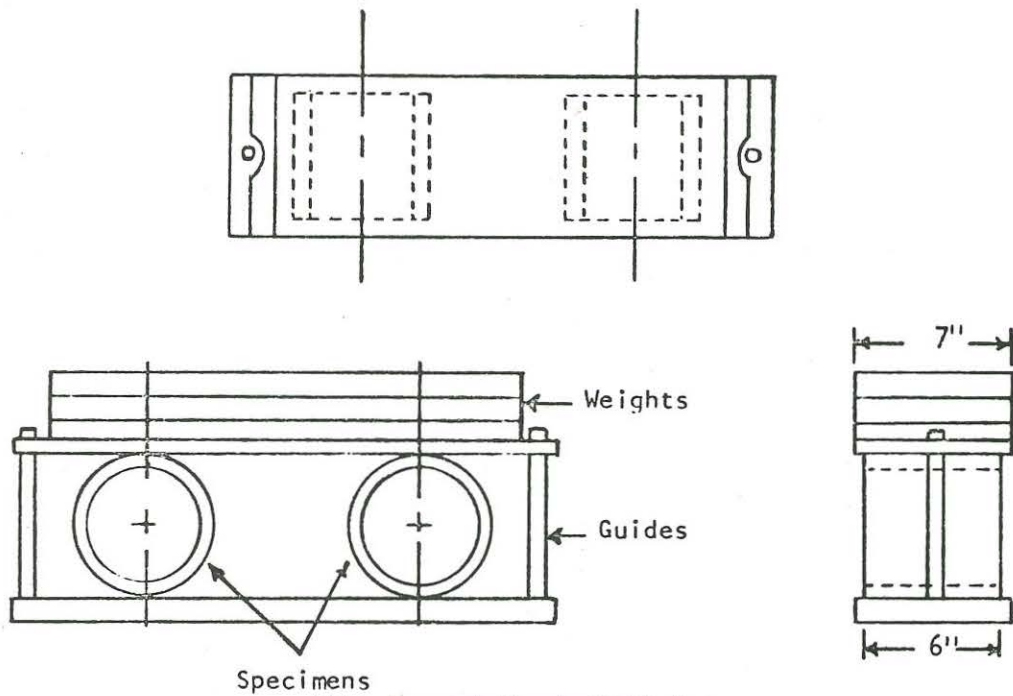


FIG. 1 Apparatus for Dimensional Stability Test.

By publication of this standard no position is taken with respect to the validity of any patent rights in connection therewith, and the American Society for Testing and Materials does not undertake to insure anyone utilizing the standard against liability for infringement of any Letters Patent nor assume any such liability.

Styrene-Rubber Plastic Drain and Sewer Pipe and Fittings

(Effective May 15, 1961)

1. PURPOSE

1.1 The purpose of this Commercial Standard is to provide a nationally recognized specification for the guidance of producers, distributors, testing laboratories, and users of styrene-rubber plastic drain and sewer pipe and fittings; and to maintain public confidence in the quality of the products of this industry.

2. SCOPE

2.1 This Commercial Standard covers requirements and methods of test for materials, dimensions, workmanship, chemical resistance, crushing strength, water resistance, dimensional stability, and joint tightness of styrene-rubber plastic pipe and fittings. A form of marking to indicate compliance with this standard is also included.

3. TERMINOLOGY

3.1 The plastics terminology used in this Commercial Standard is in accordance with the definitions given in Tentative Definitions of Terms Relating to Plastics (ASTM Designation: D883-59T), unless otherwise indicated.

4. USES

4.1 The requirements of this standard are intended to provide pipe and fittings suitable for non-pressure drainage of sewage and certain other liquid wastes, where toughness, resistance to deterioration from water and chemicals, dimensional stability, resistance to aging, and strong tight joints are required. The plastic drain and sewer pipe and fittings described in this standard are intended for use in the following applications:

1. Building sewers and underground building drains in dwellings of four families or less.
2. Storm drainage.
3. House connections to septic tanks.
4. Leaching-system piping for septic-tank effluents.
5. Footing drains (foundation drains).
6. Sanitary sewers and storm sewers.

Industrial waste disposal lines should be installed only with the specific approval of the cognizant building code authority, since chemicals not commonly found in drains and sewers and temperatures in excess of 180° F. may be encountered.

5. REQUIREMENTS

5.1 Materials.—The pipe and fittings shall be made of styrene-rubber plastic. This plastic may contain stabilizers, lubricants, dyes, pigments, and fillers. Test specimens molded from the extrusion compound or from pieces of finished pipe and fittings shall have the following properties:

5.1.1 Deflection temperature.—The average deflection temperature shall be not less than 65° C. (149° F.) when tested in accordance with paragraph 7.3.

5.1.2 Impact resistance.—The average Izod impact strength shall be not less than 0.80 ft-lb/in of notch when tested in accordance with paragraph 7.4.

5.1.3 Tensile properties.—The average tensile strength and elongation at rupture shall be not less than 3,000 p.s.i. and 15 percent, respectively, when tested in accordance with paragraph 7.5.

5.2 Dimensions.

5.2.1 Pipe diameters.—The outside diameter of the pipe shall be within the tolerances given in table 1 when measured in accordance with paragraph 7.6. The inside diameter of the pipe shall meet the requirement given in table 1.

TABLE 1.—Pipe diameters and tolerances

Nominal size	Outside diameter	Minimum inside diameter	Minimum wall thickness †
<i>Inches</i>	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>
2.....	2.250+ .010 — .000	2.000	0.073
3.....	3.250+ .015 — .003	2.875	.100
4.....	4.215+ .018 — .007	3.875	.125
5.....	5.300+ .020 — .007	4.875	.150
6.....	6.275+ .020 — .007	5.875	.180
8.....	8.400+ .020 — .010	7.750	.200
10.....	10.500+ .035 — .012	9.750	.225
12.....	12.500+ .040 — .015	11.750	.300

† These minimum wall thickness requirements do not apply to perforated drain pipe.

5.2.2 Pipe length.—The pipe shall be in 10-foot $\pm 1/4$ inch lengths unless otherwise specified.

5.2.3 Fitting dimensions.—The dimensions of fittings shall meet the requirements given in table 2 when measured in accordance with paragraph 7.6.

5.3 Workmanship.—The pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions or other injurious defects. The pipe shall be as uniform as commercially practicable in color, opacity, density, and other physical properties.

5.4 Crushing strength.—The minimum crushing strength of pipe and fittings in sizes 2" to 6" nominal diameter shall be 1000 lb. per lineal foot, and the minimum crushing strength for sizes 8", 10", and

12" nominal diameter shall be 1200 lb. per lineal foot when tested in accordance with paragraph 7.7.

5.5 *Chemical resistance.*—The pipe and fittings shall not increase in weight more than 0.50 percent or change in crushing strength more than ± 15 percent when tested in accordance with paragraph 7.8.

TABLE 2.—Fitting dimensions and tolerances

Nominal size	Dimensions				
	A		B		C
	Maximum inches	Minimum inches	Maximum inches	Minimum inches	Minimum inches
<i>Inches</i>					
2.....	2.267	2.257	2.250	2.240	$\frac{7}{8}$
3.....	3.273	3.263	3.250	3.240	$1\frac{1}{2}$
4.....	4.230	4.220	4.220	4.210	$1\frac{3}{4}$
5.....	5.315	5.305	5.305	5.295	$2\frac{1}{2}$
6.....	6.290	6.280	6.280	6.270	3
8.....	8.430	8.420	8.410	8.400	6
10.....	10.535	10.525	10.510	10.500	6
12.....	12.640	12.630	12.510	12.600	6

5.6 *Water resistance.*

5.6.1 *Water absorption.*—The pipe and fittings shall not increase in weight more than 0.60 percent when tested in accordance with paragraph 7.9.1.

5.6.2 *Wet strength.*—The minimum crushing strength of wet specimens of pipe and fittings shall be within ± 5 percent of the actual crushing strength of dry specimens when tested in accordance with paragraph 7.9.2.

5.7 *Dimensional stability.*—The average decrease in inside diameter of pipe and fittings shall not exceed 10 percent when tested in accordance with paragraph 7.10.

5.8 *Joint tightness.*—Joints made with pipe and fittings shall not leak when tested at an internal pressure of 25 p.s.i. in accordance with paragraph 7.11.

6. SAMPLING AND RETEST

6.1 *Sampling.*—A sample of the pipe and fittings sufficient to determine conformance with this standard shall be taken at random from each lot or shipment. About 40 feet of pipe are required to make the tests prescribed. The number of fittings required varies depending on the size and type of fitting.

6.2 *Retest.*—If the results of any test do not conform to the requirements prescribed in this standard, that test shall be repeated on two additional sets of specimens from the same lot or shipment, each of which shall conform to the requirements specified. If either of these two additional sets of specimens fails, the material does not comply with this Commercial Standard.

7. METHODS OF TEST

7.1 *Conditioning Test Specimens.*—The specimens shall be conditioned prior to test at $23 \pm 2^\circ$ C. ($73.4 \pm 3.6^\circ$ F.) and 50 ± 5 percent

relative humidity for not less than 48 hours in accordance with Procedure A in Standard Method of Conditioning Plastics and Electrical Insulating Materials for Testing (ASTM Designation: D618-58) for those tests where conditioning is required and in all cases of disagreement.

7.2 Test Conditions.—Tests shall be conducted in a laboratory atmosphere of $23 \pm 2^\circ$ C. ($73.4 \pm 3.6^\circ$ F.) and 50 ± 5 percent relative humidity, unless otherwise specified.

7.3 Deflection Temperature.—The deflection temperature shall be determined in accordance with Standard Method of Test for Deflection Temperature of Plastics under Load (ASTM Designation: D648-56). Two test specimens shall be injection molded under conditions specified by the manufacturer and shall be $\frac{1}{2}$ by $\frac{1}{2}$ by 5 inches. The test shall be made only at stress of 264 p.s.i. The immersion medium shall be water. The heating rate shall be $2 \pm 0.2^\circ$ C. per minute.

7.4 Impact Resistance.—The Izod impact strength shall be determined in accordance with Method A in Standard Methods of Test for Impact Resistance of Plastics and Electrical Insulating Materials (ASTM Designation: D256-56). Ten test specimens $\frac{1}{2}$ by $\frac{1}{2}$ by $2\frac{1}{2}$ inches shall be injection molded under conditions specified by the manufacturer except that the notch shall be produced by a machining operation using a single-tooth milling cutter.

7.5 Tensile Properties.—The tensile strength and elongation at rupture shall be determined in accordance with Method of Test for Tensile Properties of Plastics (ASTM Designation: D638-58T). Five Type 1 test specimens approximately $\frac{1}{8}$ -inch thick shall be injection molded under conditions specified by the manufacturer. The speed of testing shall be 0.20 to 0.25 inch per minute.

7.6 Dimensions.—Dimensions shall be measured on five cleanly cut specimens of pipe and fittings with micrometers accurate to 0.001 inch. For materials that are sufficiently flexible, a tapered plug may be used to measure the diameter provided that the diameter is not expanded by inserting the plug into the pipe or fittings. The pipe length shall be measured with a steel tape accurate to plus or minus $\frac{1}{32}$ " in 10 feet.

7.7 Crushing Strength.—The crushing strength shall be measured by the sand bearing method described in Standard Specifications for Drain Tile (ASTM Designation: C4-55). Five specimens, each sufficient in length to test an area at least 1-foot along the axis of the pipe, shall be tested. Each specimen shall meet the requirement in paragraph 5.4. When the design of a fitting does not permit the selection of a length sufficient for a test area 1-foot long, sections from several fittings may be used to obtain a composite specimen with the required length. Fittings having non-uniform diameters, such as reducers, shall be considered acceptable when the wall thicknesses at all points are equal to or greater than the wall thickness of pipes of the same diameters and of the same plastic compound that have been found to meet the crushing strength requirements for those diameters.

7.8 Chemical Resistance.—The resistance to the following chemicals shall be determined in accordance with Tentative Method of Test

for Resistance of Plastics to Chemical Reagents (ASTM Designation: D543-56T).

Chemicals	Concentration in Water Solution
Sodium carbonate	0.1N.
Sodium sulfate	0.1N.
Sodium chloride	5 percent.
Sulfuric acid	0.1N.
Hydrochloric acid	0.2N.
Acetic acid	5 percent.
Sodium hydroxide	0.2N.
Ivory soap	5 percent.
Household detergent	5 percent.
Raw sewage	5 percent.

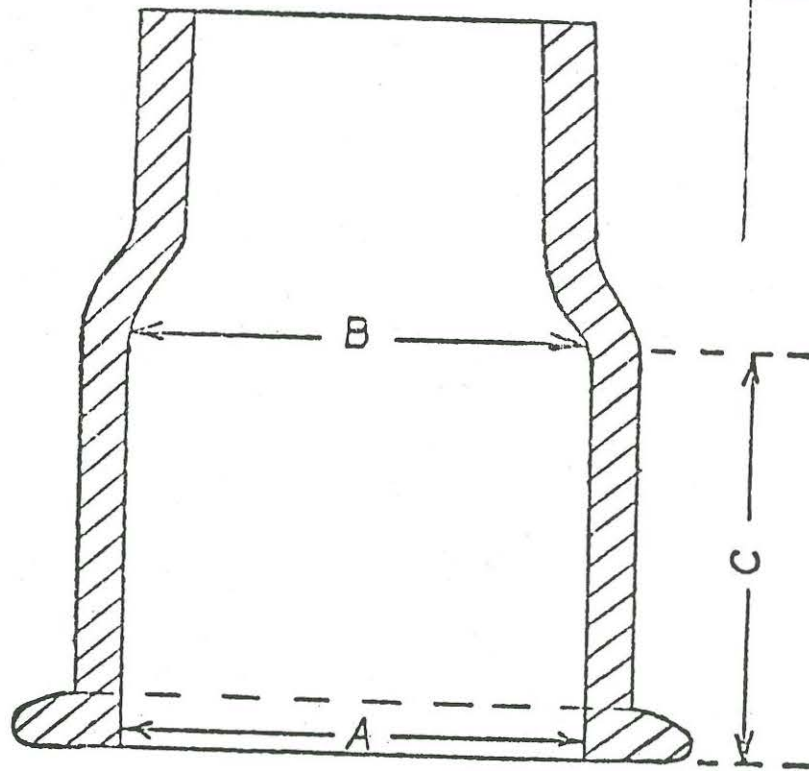


FIGURE 1. Fitting dimensions.

The test specimens shall be one foot long and cleanly cut. Three specimens shall be tested with each reagent. The specimen shall be weighed to the nearest 0.1 gram and completely immersed in the chemicals. The immersion period shall be 72 hours. On removal from the chemicals, the specimens shall be washed with running water, wiped with a clean, dry cloth, conditioned for 2 hours, $-0 +15$ minutes, and reweighed. The increase in weight shall be calculated to the nearest 0.01 percent on the basis of the initial weight. The specimen shall then be tested to determine the crushing strength in accordance with paragraph 7.7 within 30 minutes after weighing. The results obtained in both the weight and strength tests for each specimen shall meet the requirements.

7.9 Water Resistance.

7.9.1 Water absorption.—Three cleanly cut test specimens at least 4-inches long of pipe or three complete fittings shall be weighed to the nearest 0.1 gram and immersed in water at $23 \pm 2^\circ \text{C}$. ($73.4 \pm 3.6^\circ \text{F}$.) for 48 hours. The specimens shall be removed, wiped dry with a clean, dry cloth, and reweighed immediately. The average percent gain in weight shall be calculated to the nearest 0.01 percent on the basis of the initial weight.

7.9.2 Wet strength.—The specimens used to make the water absorption tests shall be tested in accordance with paragraph 7.7 within 30 minutes after removal from the water. The crushing strength of each specimen shall meet the requirement.

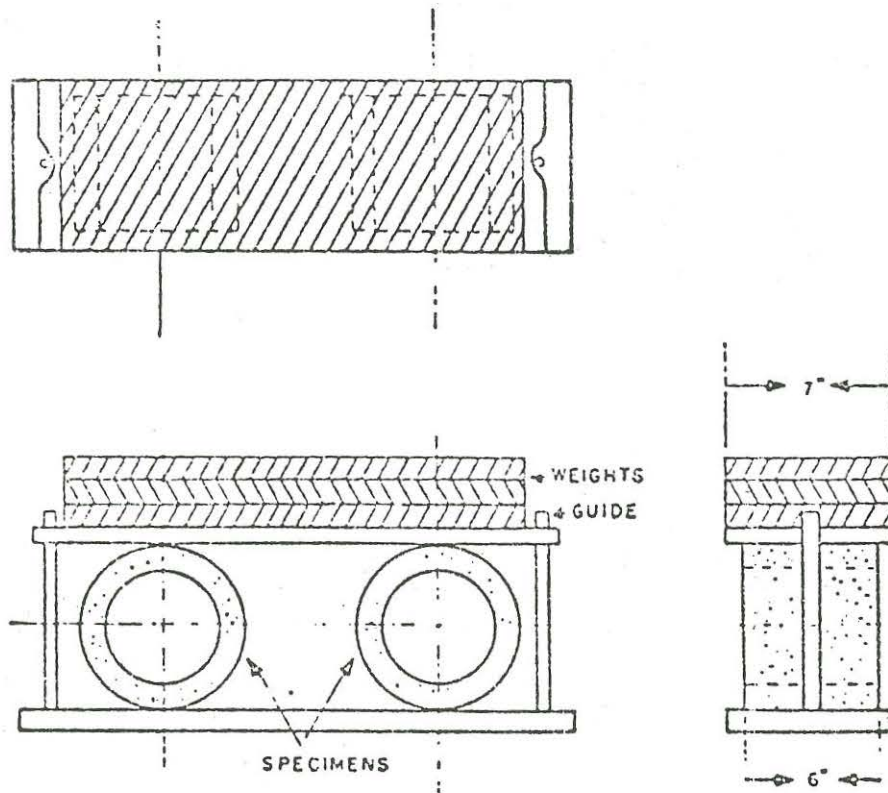


FIGURE 2. Apparatus for dimensional stability test.

7.10 Dimensional Stability.—The 6-inch long test specimens shall be cleanly cut from the pipe. A diameter shall be marked and measured on the inside to the nearest 0.001 inch. The specimens shall be placed on a flat rigid base with the measured diameter in a vertical position and the assembly placed in a circulating air oven. The pair of test specimens shall be loaded symmetrically as shown in figure 2 to produce the total load for the indicated diameter as shown in table 3.

The heat shall then be turned on in the oven and the temperature raised to $50 \pm 3^\circ \text{C}$. ($122 \pm 5.4^\circ \text{F}$.) and held there for 48 ± 1 hours. The load shall then be removed from the specimen and the specimens removed from the oven. After cooling for 1 hour, the inside diameters shall be remeasured and the average change in percent of the initial diameter shall be calculated.

TABLE 3.—Loads for dimensional stability test

Nominal size, inch	2	3	4	5	6
Total load, lb.	55	55	55	65	65

7.11 Joint Tightness.—Two pieces of pipe shall be joined together with a fitting by solvent welding or other method recommended by the manufacturer and allowed to stand for 24 hours at room temperature. The specimen shall then be subjected to an internal pressure of 25 p.s.i., with water as the medium, for 24 hours. The pipe and the joints shall show no leakage.

AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Specification for
CONCRETE DRAIN TILE¹



ASTM Designation: C 412 - 65

ADOPTED, 1960; LAST REVISED, 1965.

This Standard of the American Society for Testing and Materials is issued under the fixed designation C 412; the final number indicates the year of original adoption as standard or, in the case of revision, the year of last revision.

Scope

1. This specification covers nonreinforced concrete drain tile with internal diameters from 4 to 24 in.

Classes

2. Drain tile manufactured according to this specification shall be of the following three classes:

(a) *Standard-Quality Concrete Drain Tile*, intended for land drainage of ordinary soils where the tile are laid in trenches of moderate depths and widths. Standard-quality concrete drain tile are not recommended for use where internal diameters in excess of 12 in. are required.

(b) *Extra-Quality Concrete Drain Tile*, intended for land drainage of ordinary soils where the tile are laid in trenches of considerable depths or widths, or both.

(c) *Special-Quality Concrete Drain Tile*, intended for land drainage where

¹Under the standardization procedure of the Society, this specification is under the jurisdiction of the ASTM Committee C-13 on Concrete Pipe.

special precautions are necessary for concrete tile laid in soils that are markedly acid or contain unusual quantities of sulfates (see Section 9), and where the tile are laid in trenches of considerable depths or widths, or both (Note 1).

NOTE 1.—Where the calculated loads are in excess of the crushing strengths prescribed in Table III, tile strengths must be specified in advance by the purchaser.

Basis of Purchase

3. The purchaser shall specify in writing the class or classes of concrete tile to be supplied, whether Standard-Quality, Extra-Quality or Special-Quality. Unless Extra-Quality or Special-Quality concrete drain tile have been stipulated, Standard-Quality drain tile shall be accepted.

Basis of Acceptance

4. The acceptability of drain tile shall be determined by (1) the results of the physical tests as specified in Section 19 and in the Methods of Test for Determining Physical Properties of Concrete

SPECIFICATION FOR CONCRETE DRAIN TILE (C 412)

Pipe or Tile (ASTM Designation: C 497),² (2) measurements and inspection to ascertain whether the tile conform to the requirements regarding dimensions, shape, and freedom from visible defects, and (3) the manufacturer's certification in writing that the tile have been made in accordance with any special provisions, such as strength, absorption, permeability, type of cement, admixture, curing conditions, etc.

MATERIALS

Concrete

5. The concrete shall consist of portland cement, mineral aggregates and water, and may include admixtures and blends as described in Section 8.

Cement

6. Portland cement for concrete drain tile shall conform to the requirements of the Specifications for Portland Cement (ASTM Designation: C 150),³ or shall be air-entraining portland cement conforming to the requirements of the Specifications for Air-Entraining Portland Cement (ASTM Designation: C 175),³ or shall be portland blast-furnace slag cement conforming to the requirements of the Specifications for Portland Blast-Furnace Slag Cement (ASTM Designation: C 205).³

Aggregates

7. The aggregates for concrete drain tile shall conform to the Specifications for Concrete Aggregates (ASTM Designation: C 33),³ except that the grading requirements for aggregates are waived when the tile meet all the other requirements of this specification.

Admixtures and Blends

8. Admixtures or blends that have been proven to impart desirable proper-

² Appears in this publication.

³ 1965 Book of ASTM Standards, Part 10.

ties to concrete drain tile may be used with the approval of the purchaser.

CHEMICAL REQUIREMENTS

Acid and Sulfate Resistance

9. (a) The purchaser may specify special requirements in order to increase the durability of the drain tile in cases where the soils, soil water, or drainage waters are markedly acid (Note 2) or contain unusual quantities of soil sulfates (Note 3). Without a specific agreement in advance, no drain tile shall be rejected by reason of its composition as determined later by chemical analyses.

NOTE 2.—Soils or drainage waters with a pH of 6.0 or lower may be considered to be markedly acid.

NOTE 3.—Where the sulfates are chiefly sodium or magnesium, singly or in combination, unusual quantities of these sulfates may be assumed to be 3000 ppm (0.30 per cent) for soil or soil water.

(b) Concrete drain tile that will be installed in markedly acid soils shall meet the physical test requirements given in Table III for Special-Quality concrete drain tile. Tile that will be exposed to unusual quantities of soil sulfates shall meet the physical test requirements given in Table III and shall be made with sulfate-resistant cements.

(c) Type V portland cement shall be used where high-sulfate resistance is required, and types II and IIA portland cement shall be used for general concrete construction exposed to moderate sulfate conditions. If mutually agreed by the manufacturer and the purchaser, other cements, as described in Section 6, that have been proven to be sulfate resistant may be used.

PHYSICAL TEST REQUIREMENTS

Physical Tests

10. The physical properties of concrete drain tile shall conform to the requirements specified in Table I, or, when

SPECIFICATION FOR CONCRETE DRAIN TILE (C 412)

specified by the purchaser in advance, they shall conform to the requirements given in Tables II and III.

(a) For Standard-Quality concrete drain tile, the three-edge bearing crushing strength as shown in Table I, Column A, or the three-edge bearing crushing strength and the 5-hr boiling absorption as shown in Table I, Column B, shall meet the requirements given in Table I.

TABLE I.—PHYSICAL TEST REQUIREMENTS FOR STANDARD-QUALITY CONCRETE DRAIN TILE.

Nominal Inside Diameter, in.	Standard-Quality Concrete Drain Tile				
	Three-Edge-Bearing Crushing Strength ^a			Absorption, boiled 5 hr	
	Minimum Average, lb per lin ft		Minimum for Individual Tile, lb per lin ft	Maximum Average, per cent	Maximum for Individual Tile, per cent
	A	B	A and B	B	B
4	900	800	700	10	11
5	900	800	700	10	11
6	900	800	700	10	11
8	900	800	700	10	11
10	900	800	700	10	11
12 ^b	900	800	700	10	11

^a Drain tile meeting the above strength requirements are not necessarily safe against cracking in deep and wide trenches.

^b Tile with nominal diameters greater than 12 in. should meet the requirements specified in Table II for Extra-Quality or in Table III for Special-Quality concrete drain tile.

No absorption tests are required if the strength requirements of Table I, Column A, are met.

(b) For Extra-Quality concrete drain tile, the three-edge-bearing crushing strength and the 5-hr boiling absorption shall meet the requirements given in Table II.

(c) For Special-Quality concrete drain tile the requirements shall be as follows:

(1) The three-edge-bearing crushing strength shall meet the requirements given in Table III, or the higher specified load.

(2) The 5-hr boiling absorption shall meet the requirements given in Table III.

(3) The 10-min, room-temperature soaking absorption shall meet the requirements given in Table III.

(4) The hydrostatic test shall be

TABLE II.—PHYSICAL TEST REQUIREMENTS FOR EXTRA-QUALITY CONCRETE DRAIN TILE.

Nominal Inside Diameter, in.	Extra-Quality Concrete Drain Tile				
	Nominal Wall Thickness, in.	Three-Edge-Bearing Crushing Strength ^a		Absorption, boiled 5 hr	
		Minimum Average, lb per lin ft	Minimum for Individual Tile, lb per lin ft	Maximum Average, per cent	Maximum for Individual Tile, per cent
4	1/2	1100	990	9	10
5	9/16	1100	990	9	10
6	5/8	1100	990	9	10
8	3/4	1100	990	9	10
10	7/8	1100	990	9	10
12	1	1100	990	9	10
14	1 1/8	1100	990	9	10
15	1 1/4	1100	990	9	10
16	1 3/8	1100	990	9	10
18	1 1/2	1200	1080	9	10
20	1 5/8	1300	1170	9	10
21	1 3/4	1400	1260	9	10
24	2	1600	1440	9	10

^a For loads in excess of the supporting strengths shown in the above table, tile may be supplied using designs involving the increase of wall thickness or the use of higher strength concrete.

made, when demanded, in lieu of the 10-min room temperature soaking absorption tests. The leakage shall not exceed 1 liter in 10 min per ft of length of tile for all diameter sizes.

(5) For sulfate exposures, sulfate-resistant cement shall be specified (see Section 9).

Selection of Tile for Tests

11. The drain tile to be tested shall be selected at random by the purchaser or his representative at the point or points

SPECIFICATION FOR CONCRETE DRAIN TILE (C 412)

specified in the order. If agreeable to the purchaser, the tile may be inspected and tested in advance of shipment. Any additional expense for making tests and inspection in advance of shipment shall be paid by the manufacturer or other seller.

tests, the number of tile shall be ten for each standard physical test. In the event of failure of the tile after retest, the tile shall be rejected without further test. The manufacturer, or other seller, shall pay all cost for any retest demanded and made.

Number and Cost of Tile for Tests

12. Each standard physical test shall be made on five individual tile of each size. The manufacturer, or other seller, shall furnish tile without separate charge

SHAPES, SIZES, AND PERMISSIBLE VARIATIONS

Shape

14. All drain tile shall be circular in

TABLE III.—PHYSICAL TEST REQUIREMENTS FOR SPECIAL-QUALITY CONCRETE DRAIN TILE.

Nominal Inside Diameter, in.	Special-Quality Concrete Drain Tile (For tile exposed to corrosive waters)					Sulfate Exposures
	Minimum Wall Thickness, in.	Minimum Individual Three-Edge-Bearing Crushing Strength,* lb per lin ft	Absorption			
			Boiled 5 hr		Soaked 10 min at Room Temperature	
			Maximum Average, per cent	Maximum for Individual Tile, per cent	Maximum for Individual Tile, per cent	
4.....	1/2	1100	8	9	3	For sulfate exposures, sulfate-resistant cement should be specified (see Section 9).
5.....	9/16	1100	8	9	3	
6.....	5/8	1100	8	9	3	
8.....	3/4	1100	8	9	3	
10.....	7/8	1100	8	9	3	
12.....	1	1100	8	9	3	
14.....	1 1/8	1100	8	9	3	
15.....	1 1/4	1100	8	9	3	
16.....	1 3/8	1100	8	9	3	
18.....	1 1/2	1200	8	9	3	
20.....	1 5/8	1300	8	9	3	
21.....	1 3/4	1400	8	9	3	
24.....	2	1600	8	9	3	

* For loads in excess of the support strengths shown in the above table, tile may be supplied using designs involving the increase of wall thickness or the use of higher strength concrete.

up to 0.5 per cent of each size. The purchaser shall pay for all tile in excess of 0.5 per cent at the same price as paid for other tile of the same size and quality.

Retests

13. Should the tile first selected fail to conform to the test requirements, the seller may, at his expense, cull the tile and have other tile selected for retest from the remaining stock. For such re-

cross-section, except when otherwise specified in advance. They shall be approximately straight, except in the case of special connections. The ends of butt-end tile shall be so regular and smooth as to readily admit the making of satisfactory close joints. Other than butt-end tile may be furnished when mutually agreed between the manufacturer, or other seller, and the purchaser.

SPECIFICATION FOR CONCRETE DRAIN TILE (C 412)

Nominal Dimensions and Permissible Variations

15. Permissible variations of the nominal dimensions of diameter, length, and wall thickness, are as follows:

(a) Minimum internal diameters shall not be less than the nominal diameters by more than $\frac{1}{4}$ in. for 4- and 5-in. tile, $\frac{3}{8}$ in. for 6- and 8-in. tile, $\frac{1}{2}$ in. for 10- to 14-in. tile, $\frac{5}{8}$ for 15- to 18-in. tile, and $\frac{3}{4}$ in. for sizes of 20- to 24-in. tile.

(b) The nominal length of drain tile smaller than 12-in. diameter shall be not less than 12 in. Tile of 12- to 24-in. diameter, inclusive, shall have nominal lengths not less than the diameters. The underrun of individual tile shall not exceed 3 per cent of the nominal length.

(c) No wall thickness is specified for Standard-Quality concrete drain tile where the crushing strength and the absorption tests are used to determine the tile quality. When only the crushing strength is used to determine Standard-Quality tile, then the wall thickness for Standard-Quality tile shall not exceed the nominal shell thickness given in Table II by more than 25 per cent. The wall thickness of Extra-Quality concrete drain tile at any point shall not be less than the full thickness specified in Table II by more than $\frac{1}{16}$ in. for tile having inside diameter of 4, 5, and 6 in., $\frac{3}{32}$ in. for tile having inside diameters of 8 and 10 in., and $\frac{1}{8}$ in. for tile having inside diameters of 12 to 24 in. The minimum thickness of Special-Quality drain tile walls at any point shall be not less than shown in Table III.

INSPECTION

General Properties

16. All drain tile shall be given a thorough inspection at the agreed delivery point by an inspector approved by the purchaser, unless a satisfactory inspection has been made in advance of delivery as specified in Section 12. The

purpose of the inspection shall be to determine whether the tile, independently of meeting the physical test requirements, conform to the specifications as regards shapes and sizes as prescribed in Sections 14 and 15, and to eliminate defective tile as defined in Section 17. The manufacturer, or other seller, of the drain tile shall afford the inspector all reasonable facilities for his work, both as to the selection of tile for tests and as to inspection of the tile. Inspection shall be completed and reported promptly and full reports of all tests and inspections shall be furnished the manufacturer or other seller on his request.

Defective Tile

17. Drain tile that, when placed in a vertical position, do not give a metallic ring when struck with a light metal hammer, or that are observed to have cracks that extend through the tile wall and are of a length in excess of $\frac{1}{2}$ in. or other defects that may impair the tile strength shall be discarded without further test. Outside surface irregularities that do not affect the tile strength shall not be considered reason for the rejection of the tile.

Rejection

18. The inspector shall plainly designate all drain tile that he rejects, and such rejected tile shall be removed promptly by the manufacturer, or other seller, from any job to which the tile have been delivered.

TEST METHODS

Absorption Tests

Test Specimens

19. Specimens for the absorption tests shall be selected in accordance with the following provisions:

(a) For tile with nominal inside diameters of 12 in. or less, and nominal lengths of 12 in., the absorption test

SPECIFICATION FOR CONCRETE DRAIN TILE (C 412)

shall be made on one full-length quarter segment taken from each of the five tile broken in the strength test, constituting a standard sample as defined in Section 12. By quarter segment is meant one of the four pieces into which a tile usually breaks in the strength test. If a tile breaks in such a manner that a satisfactory quarter segment cannot be obtained, then the absorption test may be made of two or more pieces that approximate the area of a quarter tile of that size, selected so that both ends and the center portion of the tile are represented. The average absorption of the pieces so selected shall be considered the absorption for that tile.

(b) For tile with nominal inside diameters or lengths in excess of 12 in., the absorption test shall consist of three pieces, one of the pieces shall be taken from one end of the tile, another piece from the opposite end, and the third piece from near the center. The specimens shall be the full thickness of the tile, broken or cut from the tile broken in the strength test. Each specimen shall have a minimum area of not less than 25 sq in., as measured on one barrel surface. The average absorption of the three pieces shall be considered the absorption for that tile.

(c) All absorption test specimens shall be apparently sound, solid pieces of the tile and shall not show cracks or badly shattered edges.

(d) The average absorption for the Standard-Quality tile and for the Extra-Quality tile shall be the average of the absorption tests for the 5 tile constituting the standard sample as defined in Section 12, or the average of the absorption tests for the strongest and the weakest tile as measured by the crushing strength of the 5 tile of the standard sample. When drain tile fail to meet the absorption test requirement as computed by averaging the absorptions from the weakest and the strongest tile of a standard sample, then the average absorption test shall be computed by averaging the absorption tests from all the five tile from the standard sample. The average absorption for the Special-Quality tile shall be the average of the absorption tests for the 5 tile constituting the standard sample.

Procedure

20. All test shall be made in accordance with the Methods of Test for Determining Physical Properties of Concrete Pipe or Tile (ASTM Designation: C 497).²

APPENDIX K

AMERICAN NATIONAL STANDARD A6.1-1963
AMERICAN NATIONAL STANDARDS INSTITUTE

AMERICAN SOCIETY FOR TESTING AND MATERIALS

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Standard Specifications for
CLAY DRAIN TILE¹



ASTM Designation: C 4 - 62 (Reapproved 1970)

This Standard of the American Society for Testing and Materials is issued under the fixed designation C 4; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval.

Scope

1. These specifications cover drain tile made from clay, shale, fire clay, or mixtures thereof, and burned. In these specifications, the term drain tile or tile shall mean tile made only from these materials.

Classes

2. (a) Three classes of drain tile are covered:

- Standard Drain Tile,
- Extra-Quality Drain Tile, and
- Heavy-Duty Drain Tile

(b) Unless otherwise specified by the purchaser, Heavy-Duty or Extra-Quality Drain Tile shall be accepted in lieu of Standard Drain Tile, and Heavy-Duty Drain Tile in lieu of Extra-Quality. Standard Drain Tile may be furnished

and shall be considered as meeting these specifications unless another class is specified by the purchaser.

Physical Requirements

3. (a) Drain tile shall conform to the physical requirements for the class specified as prescribed in Table I.

(b) *Waiver of Absorption Requirements.*—Requirements prescribed in Table I for water absorption (5-hr boiling) shall be waived provided a sample consisting of five drain tile, meeting all other requirements, shows no disintegration or spalling and no loss in dry weight of any individual tile greater than 5 per cent when subjected to the freezing and thawing test, made as prescribed in Sections 16 and 17. The number of cycles of freezing and thawing to which each class of tile shall be subjected are:

Class	Number of Cycles
Standard	36
Extra-Quality	48
Heavy-Duty	48

¹ Under the standardization procedure of the Society, these specifications are under the jurisdiction of the ASTM Committee C-15 on Manufactured Masonry Units. A list of members may be found in the ASTM Year Book.

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SPECIFICATIONS FOR CLAY DRAIN TILE (C 4)

If tile meet the requirements of the freezing and thawing test, the average percentage absorption of the specimens used in the test shall be adopted as the maximum allowable average absorption for the contract in question. At least 80 per cent of all tile tested shall meet the requirements prescribed in this Paragraph (b).

cause slaking or disintegration of the tile shall be deemed valid grounds for rejection, unless satisfactory proof is submitted that the tile are durable and permanent.

(b) Drain tile shall be free from cracks, checks, or chips extending into the body of the tile in such a manner as would decrease the strength appreciably. There

TABLE I.--PHYSICAL TEST REQUIREMENTS FOR CLAY DRAIN TILE.

Internal Diameter of Tile, in.	Standard Drain Tile				Extra-Quality Drain Tile				Heavy-Duty Drain Tile			
	Minimum Crushing Strength, ^a lb per lin ft		Maximum Water Absorption by 5-hr Boiling, ^b per cent		Minimum Crushing Strength, ^a lb per lin ft		Maximum Water Absorption by 5-hr Boiling, ^b per cent		Minimum Crushing Strength, ^a lb per lin ft		Maximum Water Absorption by 5-hr Boiling, ^b per cent	
	Average of five Tile	Individual	Average of five Tile	Individual	Average of five Tile	Individual	Average of five Tile	Individual	Average of five Tile	Individual	Average of five Tile	Individual
4.....	800	680	13	16	1100	990	11	13	1400	1260	11	13
5.....	800	680	13	16	1100	990	11	13	1400	1260	11	13
6.....	800	680	13	16	1100	990	11	13	1400	1260	11	13
8.....	800	680	13	16	1100	990	11	13	1500	1350	11	13
10.....	800	680	13	16	1100	990	11	13	1550	1400	11	13
12.....	800	680	13	16	1100	990	11	13	1700	1530	11	13
14.....	840	720	13	16	1100	990	11	13	1850	1660	11	13
15.....	870	740	13	16	1150	1030	11	13	1980	1780	11	13
16.....	...	...	...	...	1200	1080	11	13	2100	1890	11	13
18.....	...	...	...	...	1300	1170	11	13	2340	2110	11	13
21.....	...	...	...	...	1450	1300	11	13	2680	2410	11	13
24.....	...	...	...	...	1600	1440	11	13	3000	2700	11	13
27.....	...	...	...	...	1800	1620	11	13	3330	3000	11	13
30.....	...	...	...	...	2000	1800	11	13	3590	3230	11	13

^a Strengths of sizes not listed may be interpolated between tabular values of sizes and strengths of the nearest listed diameters.

^b In case tile fails to meet absorption requirements, see Section 3 (b).

Sizes

4. (a) Sizes of drain tile shall be designated by their inside diameters.

(b) Drain tile smaller than 12 in. in diameter shall have a nominal length of not less than approximately 12 in. Tile 12 to 30 in. in diameter, inclusive, shall have nominal lengths not less than their diameters. Tile larger than 30 in. in diameter shall have a nominal length of not less than 30 in.

Materials, Workmanship, and Finish

5. (a) Presence in drain tile of any minerals or chemicals that are known to

shall be no breaks in the tile that would admit earth into the drain.

(c) Drain tile shall be reasonably smooth on the inside and shall be approximately circular in cross-section, except when otherwise specified in advance. They shall be approximately straight, except in the case of special connections. The ends of butt-end tile shall be so regular and smooth as to make possible close joints by turning and pressing together the ends of adjoining tile. Butt-end tile shall be furnished unless otherwise specified by the purchaser.

SPECIFICATIONS FOR CLAY DRAIN TILE (C 4)

(d) Drain tile shall conform to the general physical characteristics prescribed in Table II.

Inspection and Rejection

6. (a) All drain tile shall be given a thorough inspection by a competent inspector approved by the purchaser. The tile shall be inspected at a location and time agreed upon by the purchaser and seller. The purposes of the inspection shall be to: (1) cull and reject

(d) The inspector shall plainly mark all rejected drain tile, which shall be removed promptly by the seller at the expense of the seller.

(e) No drain tile shall be rejected by the purchaser on the basis of physical tests unless the laboratory test report is made available to the seller.

Sampling and Testing

7. (a) Tile shall be sampled and tested in accordance with Sections 9 to 18.

TABLE II.—DISTINCTIVE GENERAL PHYSICAL PROPERTIES OF CLAY DRAIN TILE

Physical Properties Specified	Standard Drain Tile	Extra-Quality Drain Tile	Heavy-Duty Drain Tile
Permissible variation of average diameter below specified diameter, per cent.....	3	3	3
Permissible variation between maximum and minimum diameters of same tile, percentage of thickness of wall.....	75	65	65
Permissible variation of average length below manufacturer's specified length, per cent.....	3	3	3
Permissible variation from straightness, percentage of length.....	3	3	3
Permissible thickness of exterior blisters, lumps, and flakes which do not weaken tile and are few in number, percentage of thickness of wall.....	20	15	15
Permissible diameters of above blisters, lumps, and flakes, percentage of inside diameter.....	15	10	10
General inspection.....	rigid	very rigid	very rigid

imperfect individual tile, and (2) determine whether the tile, by visual inspection, meet the requirements set forth in Sections 5 and 6.

(b) Drain tile in a dry condition shall give a clear ring when held free of the ground or tipped on edge, and tapped lightly with a hammer that has a head not exceeding 4 oz in weight.

(c) The seller may appeal from decisions of the inspector when such decisions are based on visual inspection alone, in which case the point of issue shall be determined by standard physical tests made in accordance with Sections 9 to 18. Costs of such tests based on an appeal shall be paid by the seller if the tests confirm the inspector's decision; otherwise, these costs shall be paid by the purchaser.

(b) For purposes of the test, full-size, unbroken drain tile shall be selected by the purchaser or by his authorized representative. Specimens shall be representative of the whole lot of tile from which they are selected, after culling undesirable tile which fail to meet visual inspection requirements. The place or places of selection shall be designated when the purchase order is issued. The manufacturer or seller shall furnish specimens for test without charge.

(c) Each specimen shall be so marked that it may be identified at any time.

(d) Unless otherwise specified in the purchase order, costs of tests shall be paid as follows:

(1) If results of tests show that tile do not conform to the require-

SPECIFICATIONS FOR CLAY DRAIN TILE (C 4)

ments of these specifications, the cost shall be paid by the seller.

(2) If results of tests show that tile do conform to requirements of these specifications, the cost shall be paid by the purchaser, except that in the case of the freezing and thawing test, when specifically requested by the seller in order to justify waiver of absorption requirements, the cost of tests shall be paid by the seller.

(e) Should the standard sample of tile selected as prescribed in Paragraph (a) fail to conform to physical requirements prescribed in Section 3, the seller may, at his expense, cull the tile and have other tile selected for retest from the remaining stock. Selection of specimens for the purpose of retest shall be made as prescribed in Paragraphs (a) and (b), except that the number of tile sampled shall be ten per standard physical test. If the tile selected fail to meet the requirements in the retest, the lot may be rejected by the purchaser as not meeting these specifications. The seller shall pay all costs for any retesting he demands.

Basis of Acceptance

8. (a) Acceptability of the tile shall be determined by (1) measurements and visual inspection as prescribed in Sections 6 and 7, and (2) compliance with the physical requirements as prescribed in Section 3.

(b) Acceptance of drain tile as satisfactorily meeting one of the two general requirements in Paragraph (a) shall in no way be construed as a waiver of the other.

TEST METHODS

Crushing Strength Tests

Test Specimens

9. (a) Five unbroken, full-size drain tile of each specified size shall be tested.

(b) Drain tile with nominal inside diameter of 12 in. or less shall be im-

mersed in water for at least 1 hr and not more than 2 hr immediately prior to testing. Tile with nominal inside diameters greater than 12 in. may be tested without wetting but shall not be dried except as may occur in complying with the provisions in Paragraph (c).

(c) No specimen of tile shall be exposed to water or air temperature lower than 40 F from the beginning of wetting until tested. Frozen tile shall be completely thawed before being tested.

Apparatus

10. The loading device may consist of any mechanically driven or hand-powered device that meets the following requirements: It shall be substantially built and rigid throughout so that distribution of load to the specimen will not be affected appreciably by deformation or yielding of any part. It shall provide for continuous application of load at a uniform rate—from 500 to 2,000 pounds per lineal foot per minute. It shall provide means for determination of load with an error not greater than 2 per cent.

Procedure

11. (a) Strength tests shall be made by the three-edge-bearing method.

(b) All bearings and specimens of tile shall be accurately centered to secure a symmetrical distribution of loading on each side of the center of tile in every direction.

(c) Load shall be applied as nearly continuously as testing equipment permits until the specimen fails.

(d) The lower bearing for the tile shall consist of two wooden strips free of knots and with vertical sides, having their interior top corners rounded to a radius of approximately $\frac{1}{2}$ in. (see Fig. 1). The strips shall be straight, and shall be securely fastened to a rigid base with the interior vertical sides parallel and spaced a distance apart not less than $\frac{1}{2}$ in., nor more than 1 in.,

SPECIFICATIONS FOR CLAY DRAIN TILE (C 4)

per ft of the nominal tile diameter, with a minimum spacing of 1 in. The upper bearing shall be straight and true from end to end and load shall be applied through a wood beam or wooden-faced metal beam of such dimensions that it will transmit the full load without appreciable deflection. Upper and lower

compensate for inequalities in the tile barrel shall be cast on and between the lower bearings and the tile shall be placed in position on the fillet while the plaster is still somewhat plastic.

A similar fillet shall be cast along the length of the crown of the tile. This fillet shall have a width equal to that of the upper bearing block and, for this test, the upper bearing block shall have a width 1 in. greater than the distance between the strips constituting the lower bearing.

(f) If mutually agreed by the manufacturer, or other seller, and the purchaser, proven types of bearings such as hard rubber or sand-filled high-pressure hose may be used in lieu of wooden bearings as specified in Paragraph (d).

Calculations and Report

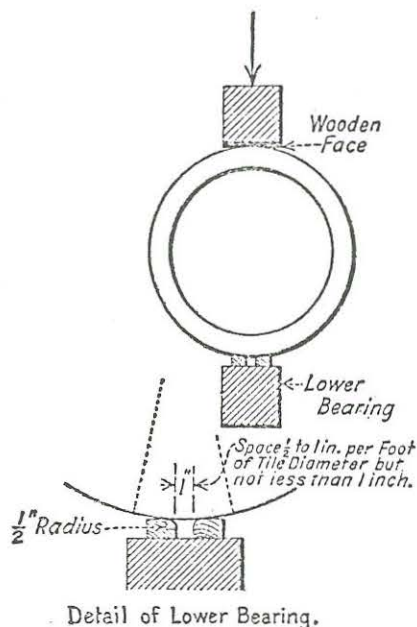
12. Results of strength tests shall be reported in pounds per lineal foot of tile. They shall be reported separately for each of the tile constituting a standard test, together with the average.

Absorption Test

Test Specimens

13. Test specimens shall consist of segments taken from each of the five tile broken in the strength test and shall be selected in accordance with the following provisions:

(a) For tile with nominal inside diameters of 12 in. or less, and nominal lengths of 12 in., a "standard sample" shall consist of one full-length quarter segment taken from each of the five tile broken in the strength test. By quarter segment is meant one of the four pieces into which a tile usually breaks in the strength test. The segment selected shall have approximately uniform width. If a tile breaks in such a manner that a satisfactory quarter segment cannot be obtained, the absorp-



Detail of Lower Bearing.

FIG. 1.—Three-Edge Bearings.

bearings shall extend the full length of tile exclusive of the bell, if any. Tile shall be placed symmetrically between the two bearings, and the center of application of load shall be at the center of the length of tile. In testing a tile that is "out of straight", the lines of bearing chosen shall be those which appear to give the most favorable conditions for a fair test.

(e) Plaster of paris bedding fillets may be used on the upper and lower bearings, if mutually agreed by the manufacturer, or other seller, and the purchaser. Before the tile is placed, a fillet of plaster of paris thick enough to

SPECIFICATIONS FOR CLAY DRAIN TILE (C 4)

tion test may be made on two or more pieces whose combined areas approximate the area of a quarter tile of that size, selected so that both ends and center portion of the tile are represented. The average absorption of the pieces so selected shall be considered to be the absorption for that tile.

(b) For tile with nominal inside diameters or lengths in excess of 12 in., the absorption test shall be made on three pieces, one piece taken from one end of the tile, another piece taken from the opposite end, and the third piece from near the center. Specimens shall have the full thickness of the tile, with all edges broken, or cut, preferably from tile broken in the strength test. Each specimen shall have an area not less than 25 sq in., as measured on one barrel surface. Average absorption of the three pieces shall be considered to be the absorption for that tile.

(c) All absorption test specimens shall be apparently sound, solid pieces of tile, shall not show cracks or badly shattered edges, and shall have laminations and fissures only to the extent that these are representative of the tile from which they are taken.

Procedure

14. (a) *Drying*.—Specimens shall be dried at least 16 hr in a ventilated oven at a temperature between 230 and 248 F (110 and 120 C) and until two successive weighings at intervals of not less than 3 hr show an increment of loss not greater than 0.1 per cent of the original weight of the specimen. Dry weights of specimens shall be the weights after final drying, and as soon as the specimen has cooled to 75 ± 10 F (24 ± 5.5 C). The balance used shall be sensitive to 0.5 g when loaded with 1 kg, and weighings shall be read to at least the nearest gram. Where other than metric

weights are used, the same order of accuracy must be obtained.

(b) *Saturation*. — Dried specimens shall be placed in a suitable container, packed tightly enough to prevent jostling and covered with clean water. Water shall be heated to boiling in not less than 1 nor more than 2 hr, boiled continuously for 5 hr, and then allowed to cool to room temperature by natural loss of heat for not less than 12 hr. Specimens shall be removed from the water and allowed to drain for not more than 1 min. Superficial water shall be removed by absorbent cloth or paper, and the specimens immediately weighed.

Calculations and Report

15. Absorption shall be calculated as a percentage of initial dry weight (Section 14(a)), carried to the nearest 0.1 per cent. Results shall be reported separately for each specimen, together with the average for all specimens comprising the standard sample.

Freezing and Thawing Test

Test Specimens

16. (a) Test specimens for the freezing and thawing test shall be in the range of absorption values that required such a test and shall be selected by one of the following methods:

(1) Specimens may be from the original tile samples used in crushing tests but not subjected to boiling, or

(2) The manufacturer shall assist in selecting a group of five tile in the absorption range at which it is desired to establish a waiver of the absorption test. However, the absorption of each test specimen shall be equal to or greater than the average absorption at which the tile failed to meet absorption requirements as shown in Table I.

(b) Two sets of test specimens shall be prepared from each of the tile selected. The size and number of test specimens

SPECIFICATIONS FOR CLAY DRAIN TILE (C 4)

shall be as prescribed in Section 13 (b) and (c). One set shall be used for determining absorption in accordance with Section 14 (a) and (b), and the remaining set, for freezing and thawing test in accordance with Section 17.

Procedure

17. (a) *Drying and Saturation.*—Specimens shall be dried in accordance with Section 14(a). Specimens shall be saturated by submersion in water at room temperature of 70 ± 30 F (21 ± 17 C) for not less than 24 hr. The same scales and weights specified in Section 14 for the absorption test, or others of equal sensitivity and accuracy, shall be used for weighings required in the freezing and thawing test.

(b) *Freezing and Thawing.*—When the specimens have been weighed at the conclusion of saturation, they shall be returned to water and kept immersed until the freezing test is begun. For freezing, specimens shall be placed with their concave faces upward in water-tight trays. Depth of water in each tray shall be adjusted to $\frac{1}{2}$ in. and the trays placed in the freezing apparatus. Freezing shall be performed in an atmosphere in which the natural or artificial air currents are no greater than necessary to maintain approximately uniform temperatures in all parts of the freezing compartment. The freezing apparatus shall have sufficient heat-absorbent capacity for lowering the temperature of the freezing compartment to $+14$ F (-10 C) within 30 min after introduction of the specimens

and for maintaining a temperature of $+4 \pm 10$ F (-15.5 ± 5.5 C). Each freezing period shall be not less than 3 hr for specimens from tile with walls up to 1.5 in. thick, and 4 hr for specimens with walls more than 1.5 in. thick. Trays containing the specimens shall then be removed and at once submerged in water at a temperature of 75 ± 10 F (24 ± 5.5 C). The tank in which the specimens are thawed should contain sufficient water to maintain water temperature at 70 ± 15 F (21 ± 8.5 C) while the specimens are thawing. In order that this condition may prevail, running water may be used or the water in the tank may be moderately heated for at least 1 hr and until all the ice has melted. The trays of specimens shall then be placed in the freezer as before and the freezings and thawings continued until the number of cycles required is completed.

Calculations and Report

18. At the end of the thawing treatment, specimens shall be inspected and the condition of each shall be noted in the records. When the number of cycles specified has been completed, specimens shall be oven-dried and weighed as specified in Section 17(a) and the loss in weight computed as a percentage of the initial dry weight. Report the number of cycles required to cause breakage, if breakage occurs. Where the specimen has not failed by breakage, the percentage loss in weight at the conclusion of 36 and 48 cycles shall be reported.



Designation: D 1861 - 69

AMERICAN SOCIETY FOR TESTING AND MATERIALS

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Standard Specification for HOMOGENEOUS BITUMINIZED FIBER DRAIN AND SEWER PIPE¹

This Standard is issued under the fixed designation D 1861; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval.

1. Scope

1.1 This specification covers homogeneous bituminized fiber drain and sewer pipe and fittings for use in nonpressure conductor and drain systems.

NOTE—The values stated in U.S. customary units are to be regarded as the standard. The metric equivalents of U.S. customary units may be approximate.

2. Materials and Manufacture

2.1 Pipe and couplings shall be composed of a bituminous compound reinforced with an interwoven fibrous structure. The fibrous material shall be thoroughly impregnated. The wall of the pipe shall be dense and homogeneous, without seams or laminations, and with a smooth interior surface free from obstructions and rough or flaky areas. Bends and fittings shall be of the same material as the pipe, or of a material having equal or better physical and chemical characteristics.

3. Joints

3.1 Pipe and bends shall be provided with accurately machined or molded tapered joints, and a taper-sleeve coupling shall be provided for each length of pipe and for each bend. The slope of the taper in both pipe and coupling shall be 2 deg (4 deg included angle) (see Fig. 1).

3.2 All joints for a given size shall be interchangeable and shall be watertight when properly assembled and tested as described in ASTM Method D 2314, Testing Homogeneous Bituminized Fiber Pipe.²

4. Physical and Chemical Requirements

4.1 *Resistance to Flattening*—The diameter decrease shall not exceed 3 percent when tested in accordance with Method D 2314, using loads specified in Table 2.

4.2 *Crushing Strengths*—The requirements for dry, wet, and coupling crushing strength shall be as prescribed in Table 2 when tested in accordance with Method D 2314.

4.3 *Beam Strength*—The requirements for beam strength shall be as prescribed in Table 2 when tested in accordance with Method D 2314.

4.4 *Joint Tightness*—There shall be no evidence of the leakage of water at the joint after a period of 24 h when tested in accordance with Method D 2314.

4.5 *Water Absorption*—The maximum water absorbed shall be not more than 2 percent of the original weight, calculated to the nearest 0.1 percent, when tested in accordance with Method D 2314.

4.6 *Boiling Water Resistance*—There shall be no evidence of disintegration or separation into laminations after immersion for 6 h, and the crushing strength shall be as specified in Table 2 when tested in accordance with Method D 2314.

4.7 *Heat Resistance*—The specimen shall show no appreciable decrease in vertical di-

¹ This specification is under the jurisdiction of ASTM Committee D-8 on Bituminous and Other Organic Materials for Roofing, Waterproofing, and Related Building or Industrial Uses. A list of members may be found in the ASTM Yearbook.

Current edition effective Oct. 3, 1969. Originally issued 1951. Replaces D 1861 - 64.

² Annual Book of ASTM Standards, Part 11.



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ameter, and no appreciable exudation of the bituminous saturant when tested in accordance with Method D 2314.

4.8 *Chemical Resistance*—Specimens shall show no evidence of softening or disintegration when tested in accordance with Method D 2314.

4.9 *Kerosine Resistance*—Specimens shall meet the dry crushing strength requirements specified in Table 2 when tested in accordance with Method D 2314.

5. Dimensions

5.1 *Pipe and Couplings*—The dimensions of the pipe and couplings shall be as specified in Fig. 1.

5.2 *Bore*—The bore shall be straight and circular in cross section as determined by passing a 36-in. (914-mm) long mandrel, $\frac{1}{4}$ in. (6.4 mm) smaller in diameter than the nominal diameter of the pipe, freely through the pipe.

5.3 *Length*—The standard length shall be 5, 8, or 10 ft (1.5, 2.4 or 3.0 m), depending upon the standard practice of the manufacturer. Length measurements shall include the tapered ends of the pipe, and a tolerance of ± 1 in. (25 mm) shall be allowed. Lengths other than standard shall be increments of 6 in. (150 mm) from standard and unless otherwise specified up to 20 percent of the short lengths may be supplied in a shipment. No lengths shorter than 4 ft (1.2 m) shall be furnished with no more than two different short lengths in any one shipment. A coupling shall be supplied with each length of pipe.

5.4 *Dimensions of Bends*—Wall thicknesses of bends shall be not less than those of the corresponding pipe. A round ball $\frac{1}{4}$ in. (6.4 mm) smaller in diameter than the nominal size shall pass through the bore of the bend freely. Dimensions of the 45 and 90-deg bends of the standard sizes furnished are shown in Fig. 2.

5.5 *Five-Degree Angle Couplings*—The dimensions of the 5-deg angle couplings shall be as specified in Fig. 3.

6. Sampling

6.1 From each lot to be tested or fraction thereof, representing a product of the same size, select at random a number of lengths equivalent to one half the cube root of the total number of lengths included in the lot, except that in lots of 1000 lengths or less, 5 lengths shall be taken. If one half the cube root, as calculated, proves to be a fractional number, express it as the next higher whole number. Test specimens shall not include damaged pipe. Tapered joints shall not be included except as specified in Method D 2314.

7. Basis of Acceptance

7.1 The lot shall be acceptable when all test specimens conform to the test requirements of Section 4. Should 20 percent or less of the specimens fail to meet these requirements, the supplier will be allowed a retest on two additional specimens for each specimen that failed, and the lot will be acceptable if all these specimens meet the requirements.

7.2 If any of the selected specimens should fail to meet other requirements of the specification than those of physical and chemical test, the supplier may cull the lot and may eliminate whatever quantity of pipe he desires and must so mark those pipes that they will not be considered part of the lot. The required tests and specimens will be made on the balance of the order, and they will be acceptable if they conform to the specified requirements.

8. Marking

8.1 Each length of pipe shall bear the manufacturer's name or trademark identification on its exterior barrel. The marking shall be durable enough to withstand outdoor storage and handling until installed.

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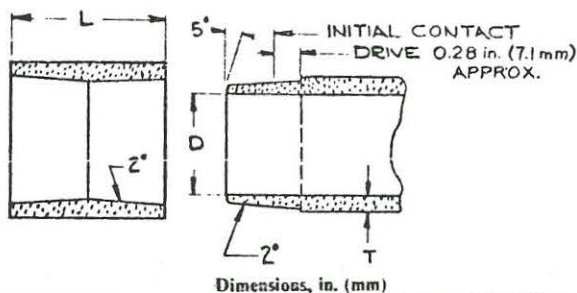
TABLE 1 Flattening Loads

	Nominal size, in. (mm)					
	2 (50)	3 (75)	4 (100)	5 (125)	6 (150)	8 (200)
Total load, lb (kg)	55 (24.9)	55 (24.9)	55 (24.9)	65 (29.4)	65 (29.4)	80 (36.2)
Load per piece, lb (kg)	27.5 (12.5)	27.5 (12.5)	27.5 (12.5)	32.5 (14.7)	32.5 (14.7)	40 (18.1)
Load, lb/ft (kg/m)	110 (164)	110 (164)	110 (164)	130 (193)	130 (193)	160 (238)

TABLE 2 Physical Requirements for Homogeneous Bituminized Fiber Drain and Sewer Pipe

Nominal Size, in. (mm)	Crushing Strength, min, lb/ft (kg/m)			Beam Strength, min, lb (kg)
	Pipe*		Coupling	
	Flat Plate	3-Edge	Flat Plate	
2 (50)	1100 (1650)	1350 (2000)	270 (400)	1000 (450)
3 (75)	1150 (1700)	1350 (2000)	315 (470)	1000 (450)
4 (100)	1250 (1850)	1350 (2000)	370 (550)	2200 (1000)
5 (125)	1350 (2000)	1400 (2100)	430 (650)	4200 (1900)
6 (150)	1450 (2200)	1450 (2200)	430 (650)	4400 (2000)
8 (200)	1800 (2700)	1800 (2700)	670 (1000)	7000 (3200)

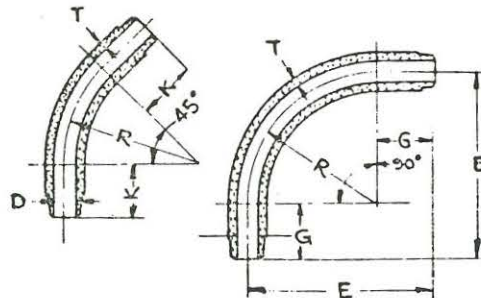
* The deflection of the specimen, based on the pipe nominal diameter, shall not exceed 10 percent before the crush value has been reached in either the flat plate or 3-edge bearing test.



	Nominal size					
	2 (50)	3 (75)	4 (100)	5 (125)	6 (150)	8 (200)
D--Minimum inside diameter	2.00 (50.8)	3.00 (76.2)	4.00 (101.6)	5.00 (127.0)	6.00 (152.4)	8.00 (203.2)
T--Minimum wall thickness	0.23 (5.8)	0.28 (7.1)	0.32 (8.1)	0.41 (10.4)	0.46 (11.7)	0.57 (14.5)
L--Minimum length of coupling	2.90 (73.7)	3.42 (86.9)	3.92 (99.6)	3.92 (99.6)	3.92 (99.6)	5.00 (127.0)

FIG. 1 Dimensions of Taper Joint for Pipe and Couplings.

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Dimensions, in.

Nominal size	2				3			4		5		6		8	
D—Minimum inside diameter	2.00				3.00			4.00		5.00		6.00		8.00	
T—Minimum wall thickness	0.23				0.28			0.32		0.41		0.46		0.57	
R—Radius	9.5	18	24	36	13	24	36	16	36	24	36	36	48		
E	17.5	26	32	38	21	32	38	24	38	32	36	36	(2)		
G	8	8	8	2	8	8	2	8	2	8	0	0	(2)		
K	8	8	8	8	8	8	8	8	8	8	8	8	8		

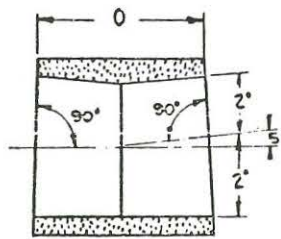
Dimensions, mm

Nominal size	50				75			100		125		150		200	
D—Minimum inside diameter	50.8				76.2			101.6		127.0		152.4		203.2	
T—Minimum wall thickness	5.8				7.1			8.1		10.4		11.7		14.5	
R—Radius	240	460	610	920	330	610	920	410	920	610	920	920	1220		
E	440	660	810	960	530	810	960	610	960	810	960	960	(2)		
G	200	200	200	50	200	200	50	200	50	200	0	0	(2)		
K	200	200	200	200	200	200	200	200	200	200	200	200	200		

NOTE 1—Details of joints are given in Fig. 1.

NOTE 2—Eight-inch (200-mm) bends are supplied regularly in 45-deg angles only.

FIG. 2 Dimensions of Bends.



Dimensions, in. (mm)

	Nominal size					
	2 (50)	3 (75)	4 (100)	5 (125)	6 (150)	8 (200)
O, min	2.98 (75.7)	3.5 (89)	4.00 (102)	4.00 (102)	4.00 (102)	5.00 (127)

FIG. 3 Dimensions of Five-Degree Angle Couplings.

Chairman
Environmental Quality Commission
1234 S.W. Morrison
Portland, Ore 97205

Jan 21, 1974

Dear Sir;

I am writing you, hoping that you receive this before the public hearing and asking that you read it into the record and consider it before acting on the proposed rules for Subsurface Sewage and nonwater-carried waste disposal, because I cannot afford the time or expense to come to the public hearing.

At the Dec 17th Public Hearing in Medford on the Proposed Rules, one person took 10 minutes of our time to state over and over that these rules were being "jammed down our throat too fast and that it was a waste of time to make comments". I almost stood up and told him to shut up and quit wasting our time; that it was the legislatures fault that things were moving so fast and that we did not know it was a waste of time until we submitted our comments and gave the commission a chance to act. I held my tongue at the time because I believe, then and now, that each citizen has a right to speak even if I don't agree with what he says. I am now partially convinced that he was right but I am going to try again.

I submitted 33 specific recommendations (and heard several more submitted by other citizens) which received very little action. Of my recommendations, 9 were changed; 6 were grammatical and 3 were of some substance. Of the 3, one was changed wrong, one was good and one was ~~completely~~ partially counteracted by a change in a different place.

Basic throughout all my recommendations was a plea to help us build homes in the hills so we can save our agriculture land and to promulgate guidelines in the rules for the DEQ to use in making judgements. Your new proposed rules do nothing in these two areas. In these new Proposed areas there are SIX areas which really hurt and I ask that you change them now;

FIRST; On page 40 you are deleting the words "where a public health hazard will not be created, or where the installation will not adversely affect the public waters of the state". This is the whole purpose of the rules and must be left in. We do not want a health hazard anywhere and we do not want our water contaminated.

SECOND; on page 25, by adding a completely new column to the chart, you have eliminated all one bedroom dwellings. This hurts those who can ~~not~~ afford to be hurt the least, the singles, the young marrieds and the elderly. The argument that a One Bedroom soon becomes a Two bedroom doesn't hold up when the dwelling is occupied by a single person or an elderly person or couple; and when occupied by this young married, the same argument applies to a two bedroom going to a three. I know a widow in her 50's who bought a 5 acre parcel and had a one Bedroom Mobile Home moved in for her to live in. It cost her at least \$300 extra for disposal area which ~~will~~ she will never use. The Sanitarians already add a safety factor when they determine the SqFt per Bedroom required and this adds an unnecessary additional Bedroom safety factor. We want it safe but let's not be over cautious.

THIRD; On page 31, changing the maximum slope from 30% to 25% and from 20% to 18% appears to be another arbitrary, overcautious step that will hurt people who have purchased land while the Health Divisions rules were in effect and have not yet ~~been~~ installed their septic system. I have no knowledge of a septic system which has failed because of the extra 2 or 5% of slope and, unless the DEQ has sufficient documentation of failures for this reason alone, to justify the hurt to be caused, this rule should be changed to continue the previous slope limitations. A person, who last year had a \$5000 rural view homesite with septic feasibility on a 29% slope and this year is subject to the "Judgement" without guidelines of the DEQ, may now own a piece of timber land worth maybe \$120.

FOURTH; On page 38, establishing the maximum length of a disposal trench as 125 feet appears to be arbitrary and without justification. If the effective sidewall area definition is correct and if the ditch bottom and the pipe are laid on grade, there doesn't appear to be justification for limiting the length of the trench. If the grade is too much, there will be pressure at the end and the effluent may force its way to the surface but if the grade is level, there will be no more upward pressure at 1000 feet than there is at 10 feet. Allowing one long trench instead of two or more short ones will allow more installations up in the hills ~~xxxx~~ instead of continuing to force construction on the agriculture land.


FIFTH; Nowhere in the rules is there any provision for local control of local problems or for appeal of the DEQ actions. We, in Jackson County, have an excellent Land Use Plan, a very good zoning ordinance and a fair and efficient appeals system. A system of checks and balances is basic throughout our form of government and I strongly urge that you amend your rules now to include provision for local control of local problems and for a simple inexpensive appeals procedure.

SIXTH; while the proposed rules provide detailed guidelines for the applicant and the DEQ for the installation of a standard septic tank and disposal system on the agriculture land of our state, there are NO guidelines for the rural areas. As property owners, we are faced with the proposition of filling out an application, paying a non-refundable \$30 fee and waiting for the "Great White Father" from the DEQ, who "shall consider" our application and who "may" allow us to put in a system. We pay our money and play the game but we don't know the rules.

This lack of guidelines will invite a mass of hopeful applications, will generate a massive workload for the DEQ, thereby justifying an increase in staff and it will open the door to bickering, heartbreak, administrative dictatorship, politically motivated approvals and corruption. No guidelines are worse for the applicant and the DEQ than too many guidelines. The known can be analyzed, evaluated and changed but the unknown is invincible.

I thank the commission for their efforts in our behalf. You have a difficult task and your only compensation is our thanks and the satisfaction of knowing that you have helped protect our health and the environment of our state.

Sincerely,


Jim Christopherson
489 Hamilton Road
Jacksonville, Ore 97530



OREGON STATE HOME BUILDERS ASSOCIATION

556 Chemeketa Street/Salem, Oregon/97301

Telephone 585-8254

January 22, 1974

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

RECEIVED

JAN 23 1974

OFFICE OF THE DIRECTOR

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LINCOLN COUNTY BUILDERS ASSOCIATION

P. O. Box 302
Newport, Oregon 97365

Oregon Environmental Quality Commission
1234 S.W. Morrison
Portland, Oregon 97205

Gentlemen:

We greatly appreciate your efforts to keep the Oregon State Home Builders Association informed throughout the preparation of your subsurface rules. Frankly, we are unable to respond coherently.

As you probably know from press reports, our energies have been devoted to coping with the implementation of legislation that has proven to be so punitive that lenders have even ceased making loans for new residential construction.

We have simply been unable to give your new rules the evaluation and analysis their importance justifies, and we certainly can't ask you to delay their implementation.

The one request we would make is if one or more sections of the rules prove to create a hardship or to be unworkable, that you give us a sympathetic and understanding hearing when we bring the issue to you.

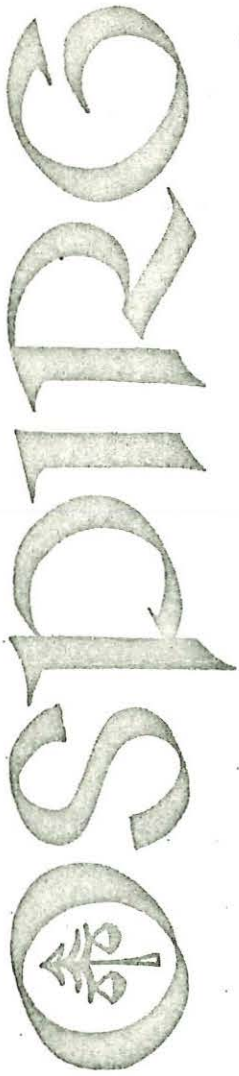
Obviously, we hope no such difficulties arise, but when you compound the different philosophical approaches to the use of septic tanks with the different engineering approaches to their installation, it's apparent that difficulties could occur.

We only ask that you make this letter a part of the record, and accept our apologies for devoting our time and efforts to our other more pressing crisis at the moment.

Sincerely,

Fred VanNatta
Executive Officer

FVN:dg



OREGON STUDENT PUBLIC INTEREST RESEARCH GROUP

"a balance for the public interest"

411 GOVERNOR BUILDING • 408 SW 2ND AVENUE
PORTLAND, OREGON 97204 (503) 222-9641

January 23, 1974

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

Re: Prime Farm Land; E.Q.C.'s Proposed Subsurface Sewage

Dear Diarmuid:

Revisions on the Commission's January 1974 proposed rules for subsurface sewage satisfactorily remedy points (3), (4), (5), and (6) in my December 14, 1973 letter to you regarding EQC's November, 1973 proposed rules for subsurface sewage.

The variance procedure (point (2); Rules page 32) still lacks the traditional "hardship" standard, and is therefore too weak. I still think inspection and pumping schedules would be desirable (point 7).

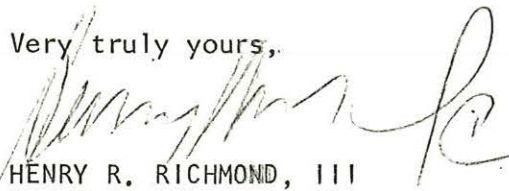
Having had no reply from the Department staff, I am concerned that the most serious point in my letter--that relating to prime farm lands--has been overlooked.

EQC's proposed regulations tend to concentrate or encourage residential development on prime agriculture land without dealing with the resulting adverse economic or environmental impacts.

Mr. O'Scannlain
January 23, 1974
Page 2

I urge that you not recommend the adoption of these proposed subsurface sewage rules without directing a member of your staff to formulate a recommendation from the DEQ to the Land Conservation and Development Commission regarding the likely impact of the Rules on prime farm lands.

Very truly yours,



HENRY R. RICHMOND, III
Staff Attorney

HRR/sgw

cc Commission Members
L.B. Day, Chairman, LCDC

OREGON STUDENT PUBLIC INTEREST RESEARCH GROUP

"A BALANCE FOR THE PUBLIC INTEREST"

411 GOVERNOR BUILDING • 408 SW 2ND AVENUE
PORTLAND, OREGON 97204 (503) 222-9641

December 14, 1973

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

re: Subsurface Sewage Disposal; E Q C's Proposed Rules

Dear Mr. O'Scannlain:

I have reviewed the Environmental Quality Commission's proposed regulations applicable to subsurface sewage systems and have the following comments:

(1) The likely effect of establishing standards for disposal trench areas (page 23) based almost exclusively on incidence of impervious or restrictive layers, water table conditions and degrees of slope -- i.e. the compatibility of soil conditions to receive septic tank effluent -- will be to increase undesirable residential development of Oregon's prime agricultural lands.

In Marion County, for example, the attached copies of Table 6, "Degree and Kind of Limitations for Stated Uses in Town and County Planning", from Soil Survey of Marion County, U. S. Department of Agriculture, Soil Conservation Service, (September, 1972), indicates why this is likely to be the case.

Of the 89 soil types found in Marion County, 81 have "severe" limitations for septic tank installation, only 4 have "moderate" limitations, and only 4 have "slight" limitations.

The survey's "Guide to Mapping Units" shows that, of the 89 soil types in the county, the eight soils with only "moderate" or "slight" limitations -- i.e. which best meet EQC's proposed standards, are also among the best farm lands in Marion County:

Willamette silt loam, 0 - 3 percent slope ("slight")	Class I-1
Sifton gravelly loam ("slight")	Class IIIs-1
Horeb gravelly silt loam ("slight to severe")	Class IIle-4
Salem gravelly loam ("slight")	Class IIs-1

Willamette silt loam	Class IJe-2
("moderate")	
Kinney cobbly loam	Class VIe-2
("moderate to severe")	
Chehalis silty clay loam	Class I-1
("moderate")	
McBee silty clay loam	Class IIe-3
("moderate")	

With the exception of Abiqua silty clay loam, the Willamette Class I and the Chehalis include all the Class I farmland in Marion County.

In other words, the best land for septic tank installation is also part of Oregon's best farm land -- an irreplaceable resource being built on and paved over at the rate of 8,000 acres per year in the Willamette Valley alone (Willamette Valley: Choices for the Future, page 12), and "more than one million acres" annually nationally (Wall Street Journal, November 19, 1973, page 1).

EQC's proposed regulations tend to concentrate or encourage residential development on prime agriculture land without dealing with the resulting adverse economic or environmental impacts.

Because the best soil for farming is also the best soil for septic tanks, and since farming is economically and environmentally important, septic tank regulation can not be based solely on the compatibility of different soils to receive septic tank effluent.

Yet, that approach appears to be the basic premise of EQC's proposed regulations.

This kind of single-purpose septic tank regulation -- standing by itself -- could be quite harmful to Oregon's \$531,000,000 annual agricultural production, as well as to the important farmland open spaces in the Willamette Valley.

RECOMMENDATION

-- EQC's proposed rules should include a provision that applications for septic tank installation permits should be denied on Class I, II and III soils in existing agricultural use, except for residences with appropriate minimum lot sizes (40-160 acres, depending on crop-type or use), and exclusive farm use zoning.

-- Because of the increased development pressure on prime farm lands likely to result from EQC's proposed subsurface sewage regulations, EQC should recommend to the Land Conservation and Development Commission that LCDC designate and regulate Oregon's prime farm lands as an "area of critical state concern" pursuant to ORS 197.405(2) (1973 Replacement Part). (Senate Bill 100).

-- Subsurface sewage system standards applicable to non-prime farm lands should be sufficiently flexible so that, with additional expenditures, septic tanks can be installed and safely operated in non-prime farm land areas.

70 (2) The procedure under "B. Low Density Areas" (page 25) is a variance procedure but it is not a variance procedure subject to the traditional variance standard.

"Unreasonable, burdensome or impractical" are vague and otherwise inadequate to protect the integrity and purposes of the standards under "V A", (page 23), and should be replaced by "hardship". 32

(3) The 250 foot requirement (page 25) unavoidably means that the variance procedure under "B. Low Density Areas" will apply only to lots of approximately 6 acres or larger, inasmuch as the lot in question must be at least 500 feet by 500 feet. 32

In many areas where a variance may be justified, it may not be desirable for the state to encourage or require the low density living patterns resulting from 6-acre or greater lot sizes.

JK (4) Does the Note on Curtain Drains at page 25 mean:

- that curtain drains may be installed only when the standards pertaining to restrictive layers are satisfied?
- that curtain drains may be installed when the standards pertaining to restrictive layers are satisfied, but solely for the purpose of intercepting or draining a perched water liquid?
- that curtain drains may be installed when the standards are not satisfied ("within" is imprecise) but the curtain drain must meet the slope and distance requirements of sentence 2 of the Note?

Mr. O'Scannlain
page four
December 14, 1973

(5) Soil structure as well as soil texture should be included as criteria in the Minimum Sidewall Seepage Area Chart at page 26.

In some instances, such as the common platy structure, effluent will not percolate through the soil, but this situation is not indicated by a standard based solely on soil texture.

(6) Under item VII Nonwater Carried Waste Disposal Facilities, (A)(3) Separation Distances the proposed 25 foot separation distance is inadequate.

For example, vaults should not be permitted on a flood plain, even though over 25 feet from surface public waters.

Vaults can be inundated or floated out of the ground, thereby threatening public health.

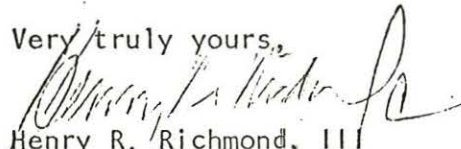
(7) Septic tank failures -- which can result in expense to landowners, pollution to the public, and difficulties in locating a replacement area on the same lot -- are often caused by inadequate septic tank pumping schedules.

EQC should establish maximum time intervals for inspection and pumping, the latter based on a maximum percentage of tank contents allowable; i.e. a ratio of sludge to liquids.

Annual inspections, such as the U. S. Forest Service requires of its permittees, may be an appropriate time interval.

Thank you for your consideration.

Very truly yours,


Henry R. Richmond, III
Staff Attorney

cc: Commission Members,
L. B. Day, Chairman, LCDC

FOR - DIARMUID F. O'SCANNLAIN, TOM MCCALL, AND OTHERS
STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
1234 S. W. MORRISON STREET
PORTLAND, OREGON 97205

GOD WOULD HAVE A PHRASE READING LIKE THIS PLACED IN THIS RED COVERED BOOK BEFORE THESE PROPOSED RULES, PERTAINING TO STANDARDS FOR SUBSURFACE SEWAGE AND NONWATER-CARRIED WASTE DISPOSAL, ARE ADOPTED.

"THAT WHICH THE PERSON OF THE HOLY SPITIT OF GODS^{SHOWS} IS ACCEPTABLE TO GOD, ADEQUATE, NOT DETERIMENTAL TO SURROUNDINGS, SAFE TO PUBLIC HEALTH, SAFE ENVIRONMENTALLY, NON POU^{UTING}, DESIGNED USING THESE RULES AS A GUIDE, WITH VARIOUS VARIATIONS, IS TO BE ACCEPTED AND APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AND PERMITS FOR THE SAME ARE TO BE ISSUED".

IF THIS ABOVE WORDING IS NOT PUT INTO THIS BOOK, YOU, DIARMUID F. O'SCANNLAIN AND PEOPLE OF D. E. Q. INSPIRE AND START A GREAT CONFLICT. A GREAT CONFLICT SUCH AS HAS BEEN THE CASE WITH THE L. D. C. P. ACT, (LAND DEVELOPMENT ACT, 2607, CH., 421, OR. L. 1973).

TOM MCCALL CALLED A SPECIAL LEGISLATIVE SESSION HELD YESTERDAY, THURSDAY BECAUSE OF THE SINFUL, UNWORKABLE ASPECTS OF H B 2607.

GOD SEES SIN IN MANY OF YOUR RED BOOK RULES THAT WOULD CAUSE ADDED UNNECESSARY BUILDING INFLATION AND COST TO CONSUMERS, HOME BUILDERS AND OTHERS. THAT WHICH IS ADEQUATE IS ADEQUATE. MANY EXTREMES ARE CONTAINED IN YOUR PROPOSED RULES.

GOVERNOR TOM MCCALL WOULD NEED TO CALL ANOTHER SPECIAL LEGISLATIVE SESSION TO WEED OUT THE SINFUL ASPECTS OF THE PROPOSED RULES FOR S. S. & N. C. W. D. 1-1974.

"IF WE LIVE IN THE SPIRIT, LET US ALSO WALK IN THE SPIRIT".
GALATIANS 5:25 BIBLE

SPOKEN AT D.E.Q. MEETING IN PUBLIC SERVICE BLDG., PORTLAND

Jan 25, 1974

COPIES TO: VARIOUS SENATORS,
REPRESENTATIVES, COUNTY DEPT'S.
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DAN MOSEE, BEN PADROW, D. E. CLARK,
MEL GORDON, LAWYERS, JUDGES, HUD,
KEN J. O'CONNELL, C. R. STAM,
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Chriss M. Hesse

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